involved with the exploration and expression of cultural traditions and individual ideas through crafts.

ARE 4642 Community Arts (3) FA ART
PR: ARE 3044. Explores the arts as infrastructure through identification, exploration and experimentation with unique community spaces, populations and new environments for and in learning the arts.

ART 4099 Directed Study: Art Education (1-3) FA ART
PR: Senior standing. Directed study contract required. Designed to extend teaching competencies in the field of art education.

ARE 4940 Internship: Art Education (1-12) FA ART
CR: ARE 4037. S/U only. One full semester internship in a public or private school program where the intern experience is distributed over two or more semesters, students will be registered for credit which accumulates from 9 to 12 semester hours.

ARH 2050 History Of Visual Arts I HP FA (3) FA ART
A survey of art of the ancient world from the origin of human society to the present. Emphasis is placed on the subject and content of artists’ productions focusing on the art of various cultures without making the Western perspective a privileged one. Open to non-majors.

ARH 3001 Introduction To Art HP FA (4) FA ART
An expanded introductory treatment of basic concepts. For art majors and non-art majors.

ARH 454C Contemporary Issues in Art HP FA MW (3) FA ART
Focuses upon the productions, themes and processes of artists working in the present time. This course will investigate the relationship of materials and media used by contemporary artists to the subject and content of artists’ products/products as well as conceptual processes.

ARH 4170 Greek And Roman Art (4) FA ART
A comprehensive study of Aegean, Mycenaean, Etruscan, Greek and Roman painting, sculpture and architecture.

ARH 4200 Medieval Art (4) FA ART
A comprehensive study of early Christian, Byzantine and Medieval painting, sculpture, architecture and manuscript illumination.

ARH 4351 Renaissance Art (4) FA ART
A comprehensive study of Renaissance and Mannerist painting, sculpture and architecture in Italy and Northern Europe.

ARH 4352 Venetian Art (4) FA ART
PR: CPR. Major monuments of Venetian art are examined to elucidate the importance of Venice as the crossroads of cultural exchange between Islam, Byzantium, and West, and the importance of Venetian art for the history of art and art criticism.

ARH 4380 Baroque And Rococo Art (4) FA ART
A comprehensive study of the painting, sculpture and architecture in France, Italy, Spain and the Netherlands in the seventeenth and early eighteenth centuries.

ARH 4383 Nineteenth Century Art (4) FA ART
A comprehensive study of nineteenth century painting, sculpture and architecture in America and Europe. Gender/multicultural issues and methodologies in 19th century art are emphasized.

ARH 4491 Twentieth Century Art (4) FA ART
A comprehensive study of painting, sculpture and architecture from Cezanne to the present in Europe and the United States. Required of all art majors.

ARH 4503 Modern Political Iconography MW (4) FA ART
PR: CPR. The course explores art in which political themes are considered to be the source and determinant of aesthetic decisions. The dominant iconographic theme is the iconography of revolution, rebellion, and other forms of political struggle in 20th Century art and film.

ARH 4520 African Art (4) FA ART
A combination of survey, comparative study and in-depth analysis of African sculpture, mainly from West and Central Africa. Emphasis on the diversity of forms and contexts, functions, symbolism and meanings.

ARH 4547 Buddhist Art (4) FA ART
PR: CPR. This course examines one important aspect of Asian artistic production. “Japanese Prints” concentrates on the period from 1615 to the present and distinguishes schools, styles, artists, subjects, patronage patterns, and technical matters. The role of prints within society and on Western art is examined throughout.

ARH 4557 Chinese Art (4) FA ART
PR: CPR. Chinese art is considered to be the source and determinant of aesthetic decisions. The course considers cultural, linguistic, technical, philosophic, political and religious influences on the art works produced by this ancient society.

ART 4710 History of Photography 6A MW (4) FA ART
PR: CPR. Comprehensive overview of the history of photography from its invention to the present day with an emphasis on the relationship of photography to the visual arts and popular culture.

ART 4721C History of Printmaking 6A (3) FA ART
The history of Western printmaking from the Middle Ages to contemporary times, with an emphasis on printmaking technology and research, cultural perspectives and theoretical/ critical analytical approaches.

ART 4721C History of Printmaking 6A (3) FA ART
The history of Western printmaking from the Middle Ages to contemporary times, with an emphasis on printmaking technology and research, cultural perspectives and theoretical/ critical analytical approaches.

ART 4750 Selected Topics In The History Of Film (4) FA ART
In-depth investigation of a selected period, development, or school in the history of film as art.

ART 4796 Critical Studies In Art History 6A (4) FA ART
PR: CPR. Specialized intensive studies in art history. Specific subject matter varies to be announced at each course offering.

ART 4930 Art History: Selected Topics (2-4) FA ART
Lecture/discussion course designed to offer areas of expertise in advanced studies in art history and art history subjects. Open to majors and non-majors. It is not repeatable for credit.

ART 4975 The History of Photography (4) FA ART
PR: Four courses in Art History at the 4000 level, CPR. An examination of the origins of Art History as a discipline and changing nature of Art History from Vasari to the present.

ART 4976 Methods of Research I (4) FA ART
Must be taken during the student's first two semesters in the M.A. program. This course introduces students to various methods which art historians have used to analyze the form and content of individual works of art, and to various modes of historical explanation.

ART 5767 Rome And Museum Internship (2-6) FA ART
Students are eligible after completing one semester in the program. S/U only. Registration by contract only. By working in Bay Area museums or galleries, students will become familiar with various museum operations, insights varying from the work of art and hands-on experience in particular museums, but possible areas of work include registration, installation, conservation, writing of grants, or museum education.

ART 2201C Fabrications FA (4) FA ART
An introduction to basic visual art studio concepts. Topics include the nature of art, the visual language of its form, modes of representation, and visual art theory. Studio problems supplemented by lecture and discussion. Emphasis on images of implied time and space.

ART 2203C Fabrications II FA (3) FA ART
PR: ART 2201C (for majors). No prerequisites for non-majors. This course will synthesize and expand on the groundwork laid in Fabrications I, which is pre-requisite for majors, but not for non-majors. Fabrications II will focus on the significance of meaning and how it is constructed visually by researching 3 phases; I - the personal in images, We - images of cultural ideas, and They - images produced through collaboration

ART 2222 Beginning Electronic Media (3) FA ART
An introductory exploration of the issues and practices involved in the creation of experimental computer art. The course focuses on an interdisciplinary approach to electronic media. Available to majors and non-majors.

ART 2301C Beginning Drawing (3) FA ART
Intermediate projects exploring the media, methods, and concepts of drawing.

ART 2400C Beginning Printmaking (3) FA ART
Intermediate projects in printing with emphasis on the exploration of techniques and methods of development of individual concepts.

ART 2701C Beginning Sculpture (3) FA ART
Intermediate projects in sculpture with emphasis on contemporary theory and issues, the development of individual concepts and the exploration of materials, tools and processes.
ART 2930 Selected Topics In Art (2-4) FA ART
Open University offerings under this number may not be counted for degree credit for art majors. The content of this course will be determined by student demand and instructor interest.

ART 3111C Intermediate Ceramics (3) FA ART
Intermediate problems in ceramics and emphasis on the exploration of new methods and the development of individual concepts.

ART 3222C Intermediate Electronic Media (3) FA ART
majors only. An intermediate exploration of the issues and practices involved in the creation of experimental computer art. The course focuses on an understanding of the specifications of media and the discipline. The course is repeatable up to 9 hours.

ART 3302C Intermediate Drawing (3) FA ART
An extension of the skills and concepts introduced in Beginning Drawing with an emphasis on individual experimentation and the development of advanced critical and technical skills in the discipline. The course is repeatable up to 9 hours.

ART 3401C Intermediate Painting (3) FA ART
This course concentrates on developing advanced skills in printmaking with particular emphasis on conceptual topics. The course is intended for majors. It is repeatable for credit up to 9 hours.

ART 3468C Digital Printmaking (4) FA ART
PR: ART 2301C Investigation of Printmaking Media including: monoprinting, collograph, relief printing and the dimensional print with emphasis on the development of individual concepts.

ART 3702C Intermediate Sculpture (3) FA ART
This course expands upon the principles and processes introduced in Beginning Sculpture and continues to the intermediate level of technical competence and critical sophistication. Intermediate Sculpture is prerequisite to Molds, Molding and bronze casting and to Site, Installation, Performance. Repeatable up to 9 hours.

ART 3710C Multiples, Molds, and Bronze Casting (3) FA ART
Continued study of projects in sculpture with an emphasis on the nature of multiples explored through advanced mold making and bronze casting. This course may not be repeated for credit.

ART 3808C Site, Installation, and Performance (3) FA ART
Continued studies and projects in sculpture with an emphasis on site-specific sculpture, installation and performance. A critical and conceptual awareness of contemporary practices and media in sculpture will be developed through studio projects assigned readings, discussions, critiques and demonstrations. The course may not be repeated for credit.

ART 4320C Advanced Drawing (3) FA ART
PR: CPR, Concentration in specialized technical data and process.

ART 3939 The Real World (2) FA ART
 Restricted to studio majors. Offers studio students the opportunity to analyze their experiences as art majors and explore options upon completion of their degree.

ART 4111C Advanced Ceramics (3) FA ART
PR: ART 3110C. Continued problems in ceramics.

ART 4223 Advanced Electronic Media (3) FA ART
PR: ART 3222C. Advanced work in contemporary electronic media in sculpture. Will be developed through studio projects and media in sculpture.

ART 4320C Advanced Drawing (3) FA ART
PR: ART 2301C Continued projects in drawing.

ART 4402C Advanced Printmaking (3) FA ART
PR: ART 2400C This course is designed as an advanced printmaking studio and emphasizes content and meaning in visual imagery. The student is encouraged to work in a specific printmaking medium (intaglio, relief, lithography or screen printing) and develop a cohesive series of images.

ART 4520C Advanced Painting (3) FA ART
PR: ART 2510C. Concentration in the content and meaning in visual imagery. The student is encouraged to work in a specific printmaking medium (intaglio, relief, lithography or screen printing) and develop a cohesive series of images.

ART 4702C Advanced Sculpture (3) FA ART
PR: ART 2701C. Continued problems in sculpture.

ART 4703 Sculpture III (4) FA ART
PR: ART 2702C, CPR. Study of current 3-D issues in art with advanced self directed project to explore the development of a personal vocabulary in 3-D media.

ART 4808C Theme Studio (3) FA ART
An advanced studio art offering. Each course is taught by a different studio art instructor.

ART 4905 Directed Study (1-4) FA ART
PR: CI. Registration by contract only. Independent studies in the various areas of Visual Arts. Course of study and credits must be assigned prior to registration.

ART 4930 Selected Topics in Art (2-4) FA ART
Open University offerings under this number may not be counted for degree credit for art majors. The content of this course will be determined by student demand and instructor interest.

ART 4955 Senior Projects (2-4) FA ART
PR: Senior year and the completion of all art preparation course work. CR: Studio Workshops and one Theme Studio. Restricted to majors. Required of all Art majors. Independent study with professor. Student designed project to be completed before end of senior year. Projects may include designs for community and public art programs, installations, curatorial work, performance, a series of work developed within a particular studio discipline, etc.

ART 4970C Senior Thesis (3) FA ART
The creation of a coherent body of advanced level artwork that is supported by a written document of critical processes working procedures, research, context and content of the artwork itself. The course is restricted to majors.

ART 5125C Ceramics (4) FA ART
PR: ART 2111C, CPR. Advanced problems in the various ceramic techniques, including throwing and glaze calculation.

ART 5340C Drawing (4) FA ART
PR: ART 4320C, CI. Advanced problems in various drawing techniques. Emphasis on individual critical expression.

ART 5422C Lithography (4) FA ART
PR: ART 4402C, CI. Advanced problems in various lithographic techniques. Emphasis on individual creative expression.

ART 5472C Intaglio (4) FA ART
PR: ART 4402C, CI. Investigations into more complex intaglio processes including photogravuring and color printing procedures. Emphasis on personal conceptual development in graphic media.

ART 5533C Painting (4) FA ART
PR: ART 2520C, CPR. Advanced problems in the various painting techniques. Emphasis on individual creative expression.

ART 5730C Sculpture (4) FA ART
PR: ART 2702C, CPR. Advanced problems in the various techniques of sculpture. Emphasis on individual creative expression.

ART 5910 Research (1-4) FA ART
PR: CI. Registration by contract only.

ART 5936 Studio Techniques: Selected Projects (2) FA ART
PR: CPR. Concentration in specialized technical data or processes.

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

ASH 3501 History of India (4) AS HTY
A study of the major themes of Indian history from the Indus culture to the present. Emphasis will be given to the Classical, Mogul and British periods as well as to life in the modern independent sub-continent.

ASN 3012 Japan Today SS (3) AS INT
Area study courses are multi-disciplinary in nature and deal with one or more countries of a region. Each course combines some measure of political, economic, historical, religious, geographic, anthropological, and sociological analysis in dealing with salient features and current problems.

ASN 3014 China Today AF (4) AS INT
Area study courses are multi-disciplinary in nature and deal with one or more countries of a region. Each course combines some measure of political, economic, historical, religious, geographic, anthropological, and sociological analysis in dealing with salient features and current problems.

ASN 3020 The Middle East AF (3) AS INT
Area study courses are multi-disciplinary in nature and deal with one or more countries of a region. Each course combines some measure of political, economic, historical, religious, geographic, anthropological, and sociological analysis in dealing with salient features and current problems.

ASN 3105 The Pacific Century SS HP AF (3) AS INT
Explores the themes and trends which have affected the entire Asia-Pacific region. Textual material and videos trace the emergence of the modern nations of Northeast and Southeast Asia, focusing on the political and economic development of the past 150 years. (Open University - televised course).

AST 2005 Astronomy of the Solar System WS (4) AS AST
Introduction to the Astronomy of the Solar System. No Physics background assumed. Topics covered include properties of light, stellar coordinates, timekeeping, eclipses, formation and dynamics of the solar system, properties of the sun and planets, space exploration of planets and the moon, life on or other worlds. This course is complementary to but independent of AST 2006. Either may be taken before the other or taken by itself.
AST 2006 Stellar Astronomy and Cosmology  (NS)  (4) AS AST
An introduction to Astrophysics and the structure of the universe. No Physics background assumed. Topics covered include properties of light, stellar coordinates, measurements of the physical properties of stars, formation, structure and evolution of stars, normal and peculiar galaxies, cosmology. This course is complementary to but independent of AST 2005. Either may be taken before the other or taken by itself.

AST 2032C Illustrative Astronomy  (3) AS AST
Constellations, use of small telescopes, etc., apparent motions of celestial objects, comets and meteors, seasons, weather. Current events in the space program. Planetary and open sky demonstrations.

AST 3033 Contemporary Thinking in Astronomy  (NS)  (3) AS AS
PR: Jr. or Sr. Standing or CI. Seminar designed to assist the layman, with no scientific background, in comprehending contemporary developments in Astronomy. Necessary background material is provided by the instructor and a text. Topics covered in recent years include the space program, pulsars, x-ray astronomy, black holes, extra-terrestrial life, interacting galaxies, cosmology.

AST 3044 Archæoastronomy  (3) AS AST
PR: Jr. or Sr. Standing or CI. Astronomical concepts and observation techniques used by prehistoric/ancient people for detecting change of seasons, constructing calendars, predicting eclipses, etc. Particular attention is given to Stonehenge, and to works of N.A. Indians, the Maya and Aztecs, and the Egyptians. Lect.-Lab.

AST 3062 Navigation  (3) AS AST
PR: Some knowledge of geometry, algebra, and trigonometry. Timekeeping, use of sextant, constellations, celestial navigation with minimum equipment, spherical astronomy.

AST 3930 Selected Topics in Astronomy  (1-4) AS AS
PR: CI. Course content will depend upon the interest of the faculty member and student demand.

AST 5506 Introduction to Celestial Mechanics  (3) AS AST
PR: MAC 2313 or MAC 2283 and some knowledge of differential equations, or one of the two-body-problems, introduction to Hamiltonian systems and canonical variables, equilibrium solutions and stability, elements of perturbation theory.

AST 5932 Selected Topics in Astronomy  (1-5) AS AST
PR: Senior or advanced junior standing or CI. Intensive coverage of special topics to suit needs of advanced students.

BCH 3023 Introductory Biochemistry  (3) AS CHM
PR: CHM 2200 or CHM 2211 and BSC 2010. Introduction to the chemistry and intermediary metabolism of biologically important substances. Lec.

BCH 3023L Basic Biochemistry Laboratory  (2) AS CHM
CR: BCH 3023. Practical work in determination and characterization of important biomolecules. Lec.-lab.

BCH 4025 Advanced Biochemistry  (3) AS CHM
PR: BCH 3023. An advanced undergraduate course emphasizing such topics as metabolic regulation, DNA and RNA structure and function, receptors, channels, antibodies, and contraction.

BCH 5045 Biochemistry Core Courses Laboratory  (0) AS CHM
PR: Either CHM 2211, CHM 2211L, and CHM 3400 or CHM 4410 or graduate standing. A one-semester survey course in biochemistry for graduate students in chemistry, biology, and other appropriate fields and for particularly well-qualified undergraduates. Lec.

BMS 4402 Principles of Human Pharmacology  (3) ME MSG
Not available on S/U basis. Pharmacodynamics (effects), pharmacokinetics (absorption, distribution, metabolism, excretion) and side effects/toxicity of drugs. Designed to provide basic understanding of mechanism of drug action resulting from modifying biologic processes.

BOT 3373C Vascular Plants: Form and Function  (4) AS BIO

BOT 3505C Medical Botany  (3) AS BIO
PR: BSC 2011, BSC 2011L, CHM 2210. Study of agents that are protected by plants and that are toxic or psychoactive in human beings or are useful as remedies.

BOT 4143C Field Botany  (3) AS BIO
PR: BOT 3373C. Identification and classification of native and naturalized flowering plants of Florida. Topics include historical, climatic and floristic aspects of plant communities. Conducted largely in the field.

BOT 4223C Plant Anatomy  (3) AS BIO
- An advanced course covering descriptive studies of tissue and organ systems of fossil and present-day vascular plants. Functional and phylogenetic stresses stressed. Lec.-lab. Course offered every two years.

BOT 4434C Mycology  (3) AS BIO
PR: BOT 3373C or MCB 3030C. A survey of the fungi with emphasis on their taxonomy, morphology, physiology and economic importance. Lec.-lab.
BSC 2932 Select I Topics in Biology (1-4) AS BIO
PR: BSC 2900, BSC 2900L
BSC 3283C Marine Biology (3) AS BIO
PR: BSC 2010, BSC 2010L, BSC 2100, BSC 2100L
BSC 4057 Environmental Issues MW (3) AS BIO
Study of biological, economic, ethical, legal, political and social issues relating to environmental problems. Emphasis is placed on ocean and coastal environments.
BSC 4402L Biological Research Methods (3) AS BIO
PR: BSC 4931 or BSC 4932. Enrollment is limited to Biology Department Honors students. S/U only. A course to prepare Biology Honors students to work on their Honors theses.
BSC 4905 Independent Study (1-3) AS BIO
PR: CR. S/U only. May be taken by majors for free elective credit. Specialized independent study determined by the student’s needs and interests. The written contract required by the Department of Biology specifies the regulations governing independent study.
BSC 4910 Undergraduate Research (1-4) AS BIO
PR: CR. S/U only. Individual investigation with faculty supervision. Written contract by Department is necessary prior to registration.
BSC 4931 Honors Seminar I (2) AS BIO
Enrollment is limited to Biology Department Honors students. A course linked to the Biology Departmental Seminar in which students read publications related to the seminars, discuss the presentations and write critiques.
BSC 4932 Honors Seminar II (3) AS BIO
Enrollment is limited to Biology Department Honors students. A reading and discussion course involving areas of general interest in biology.
BSC 4933 Selected Topics In Biology (1-3) AS BIO
BSC 4970 Biology Honors Thesis (1-3) AS BIO
PR: BSC 4402L and either BSC 4931 or BSC 4932. Enrollment is limited to Biology Department Honors students. S/U only. A thesis based on independent research carried out by the student.
BTE 4401 Special Teaching Methods: Business Education (4) ED EDV
PR: Successful completion of BE competencies. Methods, techniques, and materials for skill development.
BTE 4909 Directed Study: Business Education (1-3) ED EDV
PR: Senior standing. To extend competency in teaching field.
BTE 4936 Senior Seminar in Business and Office Education (2) ED EDV
PR: Senior standing; CR: BTE 4940. Synthesis of teacher candidate’s courses in complete college program.
BTE 4401 Internship: Business Education (1-12) ED EDV
CR: BTE 4936. S/U only. One full semester of internship in a public or private school. In special programs where the intern experience is distributed over two or more semesters, students will be registered for each accumulated semester from 9 to 12 semester hours.
BTE 4948 Field-Based Seminar in Business Education (3) ED EDV
S/U only. Supervised field experience and orientation to broad field of business education. Specifically designed to be preparatory for the internship.
BTE 5171 Curriculum Construction: Business Education (3) ED EDV
Curriculum scope, the process of planning and organizing instructional programs with emphasis on task analysis and process evaluation.
BUL 3320 Law And Business I (3) BA GBA
This course covers the nature of legal and societal institutions and environments, and major aspects of public, private, UCC and related business law.
BUL 3321 Law And Business II (3) BA GBA
PR: BUL 3320. Legal problems in marketing of goods, nature of property, sales of personal property, securing of credit granted, nature and use of negotiable instruments.
BUL 5331 Law and the Accountant (3) BA GBA
PR: BUL 3320 or Cl. A comprehensive study of commercial law as it affects the practice of accounting.
CAP 5400 Digital Image Processing (3) EN ESB
PR: EEL 4851C or GS Image formation, sources of image degradation, image enhancement techniques, edge detection operators and threshold selection, low-level processing algorithms for vision, image data compaction.
CAP 5625 Introduction to Artificial Intelligence (3) EN ESB
PR: EEL 4851C Basic concepts, tools, and techniques used to produce and study intelligent behavior. Organizing knowledge, exploiting constraints, searching spaces, understanding natural languages, and problem solving strategies.
CAP 5882 Expert And Intelligent Systems (3) EN ESB
PR: EEL 4851C Basic concepts, techniques and tools for the design and implementation of expert and intelligent systems. Knowledge representation, inference methods, knowledge acquisition methods, and some advanced topics. Tools to facilitate construction of expert and intelligent systems.
CBH 4004 Comparative Psychology (3) AS PSY
PR: PSY 3213 with a grade of C or better, or Cl. The study of the evolution of behavior and development and differences in capacities for environmental adjustment and for behavioral organization among important types of living beings.
CCJ 3003 Crime and Justice in America SS (4) AS CJP
May be taken by both majors and non-majors for credit, subject to departmental approval for declared majors. This course is a non-technical survey of the nature of crime in the United States and the ways in which our society seeks to deal with criminal offenders and victims of crime.
CCJ 3024 Survey of the Criminal Justice System SS (3) AS CJP
An introduction to the structure and operation of law enforcement, prosecution, the courts, and corrections. Also includes brief coverage of major non-federal crimes.
CCJ 3204 Substantive Criminal Law (3) AS CJP
PR: CCJ 3024, CCJ 3610, CCJ 3621, POS 2041 or Cl. Examines the historical basis of the American criminal law system, the substantive elements of the criminal law, and the process of prosecution and trial.
CCJ 3610 Theories of Criminal Behavior (3) AS CJP
PR: CCJ 3024. Provides a basic understanding of the complex factors related to crime, with concentration on principal theoretical approaches to the explanation of crime.
CCJ 3621 Patterns of Criminal Behavior (3) AS CJP
PR: Junior standing. Reviews the nature and extent of the crime problem. The course will concentrate on major patterns of offender behavior including crimes against the person, property crimes, violent crimes, economic/white collar offenses, syndicated (organized) crimes, consensual crimes, female crime, political crime, and will examine criminal career data.
CCJ 3701 Research Methods in Criminal Justice I (3) AS CJP
PR: CCJ 3024 or CCJ 3610 or Cl. Introduces the student to some of the fundamentals of knowledge-generating processes in criminal justice.
CCJ 4103 Critical Issues in Policing (3) AS CJP
PR: CCJ 3024 or CCJ 4110 or Cl. Focuses on some of the most critical issues in law enforcement today including: understanding and controlling police use of deadly force; police deviance; police prejudice and discrimination; violence-prone police officers; substance abuse by police officers; and administrative review of police actions.
CCJ 4110 American Law Enforcement Systems (3) AS CJP
PR: CCJ 3024 or CCJ 3610 or Cl. Provides a comprehensive examination of the American law enforcement system at the federal, state and local levels and an assessment of career opportunities within the community.
CCJ 4260 Environmental Law and Crime (3) AS CJP
PR: CCJ 3024 or Cl. The course provides students with an introduction to issues in the area of environmental crime and environmental law.
CCJ 4273 Criminal Rights and Procedures (3) AS CJP
PR: CCJ 3024 or Cl. Emphasizes the Constitutional issues and rules that are applied and enforced by the courts while processing criminal cases.
CCJ 4282 Correctional Law (3) AS CJP
PR: CCJ 3024 or Cl. The course provides students with an introduction to legal issues in the area of corrections, with an emphasis on civil and criminal liability for correctional staff and administrators and on convict’s rights.
CCJ 4306 American Correctional Systems (3) AS CJP
PR: CCJ 3024 or CCJ 3610 or Cl. Analysis of the different treatment philosophies and techniques currently in use in the field, with special attention to experimental and demonstration programs.
CCJ 4316 Correctional Administration (3) AS CJP
PR: CCJ 3024 or Cl. The course provides students with an introduction to issues in correctional administration in both institutional and community-based settings.
CCJ 4331 Alternatives to Incarceration (3) AS CJP
PR: CCJ 3024 or CCJ 3610 or Cl. This course explores a variety of alternatives to imprisoning the offender, including probation, parole, diversion, and other community-based intervention and treatment approaches.
CCJ 4341 Intervention Techniques and Strategies (3) AS CJP
PR: CCJ 3024 or CCJ 3610 or Cl. Introduces the student to theories
and methods underlying treatment modalities currently employed in correctional agencies.

CCJ 4450 Criminal Justice Administration (3) AS CJP
PR: CCJ 4110 or CJP 4100 or CI. This course is designed to provide an in-depth examination of both the practical and theoretical aspects of the administration of criminal justice agencies. The major focus will be on the role and functions of the various agencies. Issues which emerge when working with multi-cultural populations will be discussed. Police efforts at early detection, intervention, and diversion. Interaction with status offenders and children in need-of-assistance will be a topic of concern.

CCJ 4513 Juvenile Rights and Procedures (3) AS CJP
PR: CCJ 4110 or CJP 4100 or CI. The course provides students with an introduc­tion to the Juvenile Justice system, particularly with the issues on juveniles' rights as they relate to the juveniles in trouble who are processed through the beginning of the juvenile court system as well as the rights and subsequent procedures that juveniles will encounter as they are processed further through the juvenile justice system or probably transferred to the adult criminal justice system.

CCJ 4540 Juvenile Correctional Responses (3) AS CJP
PR: CCJ 4100 or CJP. Focuses on juvenile correctional responses from diversion to the use of secure facilities. How the system attempts to handle status offenders and children in need of supervision will be covered. Detention, probation, and community-based measures will be discussed.

CCJ 4550 Developmental Aspects of Juvenile Delinquency (3) AS CJP
PR: CCJ 3610 & CCJ 4501 or CI. Provides the student with a developmental/life course perspective of the processes, events, and factors which occur during childhood and adolescence and cause juvenile delinquency. This course focuses on the conditions which are critical in shaping the delinquents' behavior during their formative years.

CCJ 4604 Abnormal Behavior and Criminality (3) AS CJP
PR: CCJ 3610 or CI. A systematic introduction to the relationship between mental illness and criminality, with focus on psychiatric labeling and deviant behavior and its implications for the handling of the criminal offender.

CCJ 4652 Juvenile Substance Abuse (3) AS CJP
PR: CCJ 4601 or CI. Focuses on youth and drugs. It will cover such topics as drug use rates and patterns of different drug use among youths with varying sociodemographic characteristics, the context and effects of use of various drugs, the drugs-crime connection, prevention, early intervention and treatment efforts, and drug use policies.

CCJ 4700 Statistical Research Methods in Criminal Justice II (3) AS CJP
PR: CCJ 3024 or CCJ 3610 or CI. Beginning with the scientific method, the tools commonly used to analyze criminal justice data will be emphasized. Recommended for students who intend to continue their education beyond the B.A. Required of students attending the MA program in CCJ at USF.

CCJ 4801 Private Security Systems (3) AS CJP
PR: Junior standing plus CCJ 4110, CJP 3024, CCJ 3610, CCJ 3621 or CI. Examines some of the principal methods and techniques currently used to reduce or prevent losses due to theft and casualty.

CCJ 4900 Directed Readings (1-3) AS CJP
PR: CCJ 4110 or CJP 4100 or CI. S/U only. (a) Students wishing to enroll must make arrangements with a faculty member during the semester prior to actually taking the course; (b) a minimum of four 4 CCJ courses must have been completed satisfactorily prior to enrollment. (c) First consideration will be given to Criminology majors (d) Individual faculty members may add additional requirements at their discretion. No more than five hours of CCJ 4900, CCJ 4910 or any combination of the two will be accepted toward the minimum number of hours required for the major. This course is designed to provide students with a research experience in which they will work closely with faculty on the development and implementation of research projects in the area of criminal justice.

CCJ 4933 Selected Topics in Criminology (3) AS CJP
PR: Junior standing, CCJ 3610 or CCJ 3621, CJP 4100. No more than 9 hours of CCJ 4933, CCJ 4934, or any combination of the two will be accepted toward the minimum number of hours required for the major. Lecture course. Topic varies and is designed to address a wide variety of issues in criminology and criminal justice. Open to non-majors with CI.

CCJ 4934 Seminar in Criminology 6A MW (3) AS CJP
PR: Senior standing, CCJ 3621, CCJ 3621, and CI. No more than 6 hours of CCJ 4933, CCJ 4934, or any combination of the two will be accepted toward the minimum number of hours required for the major. These variable topic seminars are used for the in-depth study and discussion of the relationships among culture, gender, ethics, age, society, and criminal behavior. Such examinations may include the options that criminal justice does (or does not) have to deal with these interactions, and the ethics and efficacy of the system's response. Open to non-majors with CI.

CCJ 4940 Internship For Criminal Justice Majors (3) AS CJP
PR: Senior standing, CCJ 3621, S/U only. No more than 9 hours of CCJ 4940 will be accepted toward the elective hours required for the major. The internship will consist of placement with one or more of the agencies comprising the criminal justice system. This course will enable the students to gain meaningful field experience related to their future careers. The three-hour block of credit will require a minimum of ten hours of work per week within the host agencies in addition to any written work or reading assignments. See requirements for the B.A. degree in Criminology for the number of hours required.

CDA 3201 Computer Logic Design (3) EN ESB
Advanced coverage of Boolean algebra, introduction to the minimiza­tion of combinational logic circuits, analysis and synthesis of sequential circuits, testing of logic circuits and programmable logic devices.

CDA 3201L. Computer Logic Design Lab (1) EN ESB
Laboratory providing practical experience with the concepts of digital logic design covered in CDA 3201.

CDA 4100 Computer Organization and Architecture (3) EN ESB
PR: EEL 4705. Elements of computer systems; processors, memory transfer registers, representation of a computer, ALUs and their implementation. The control unit. Memory and I/O. Hardware support of operation system functions.

CDA 4203 Computer System Design (3) EN ESB
PR: CDA 4203. EEL 4705, EEL 4705L. Design Methods, Top-Down design, Building Blocks, Instruction and addressing models, minicomputer design, interfacing.

CDA 4203L. Computer System Design Lab (1) EN ESB
PR: EEL 4705 and EEL 4705L. CR: CDA 4203. This lab introduces the student to the concept of system design. Several projects are given including building timing circuits, memory-based and communication circuits, and microcomputer-based designs.

CDA 5405 Modeling Computer System Performance I (3) EN ESB
PR: Knowledge of basic calculus and probability theory Ability to program computers in a higher level language. Development of models based on queuing theory for evaluation of computer system performance. Analysis of computer and communication networks of queues. Operational analysis. Asymptotic bounds analysis.

CDA 5406 Modeling Computer System Performance II (3) EN ESB
PR: CDA 5400 Continuation of Performance Modeling I. Practical limitations. Numerical accuracy and stability. Students will develop a practical modeling program and explore its use.

CEG 4011 Soil Mechanics I (3) EN EGX
PR: EGN 3535C. Fundamental and experimental concepts in soil mechanics with emphasis on soil properties, soil moisture, stress structure, and bearing strength.

CEG 4011L Geotechnical Laboratory (1) EN EGX
CR: CEG 4011. Demonstrates and experiments verifying theoretical bases of Geotechnical Engineering. One hour lecture and two laboratory hours per week.

CEG 4012 Soil Mechanics II (3) EN EGX
CR: CEG 4011. Design of retaining walls, earth slopes, foundations
Introduction to control settlement, soil stabilization and foundations subjected to dynamic loads. Computer applications to soil mechanics will be covered.

CEG 4801 Geotechnical Design (2) EN EGX
CR: CEG 4011. Design of geotechnical systems including bases, foundations, embankments, and dams.

CEG 4850 Capstone Geotechnical/Transportation Design MW (3) EN EGX
PR: CEG 4011, TTE 4011. A capstone geotechnical/transportation design experience for seniors in Civil and Environmental Engineering. Design of embankment and pavement bases. Comprehensive surface streets, open highway intersection and site design involving functional design, facility sizing, complete alignments and coordination, plan preparation, site layout and design, quantity summarization, bid tab planning and specification preparation.

CEG 4115 Foundation Engineering (3) EN EGX
PR: CEG 4011 or CI. Design of shallow foundations, cantilevered and anchored retaining walls, piling, drilled piers and special foundations. Computer applications to geotechnical engineering are provided.

CEG 5205 Laboratory Testing for Geotechnical Engineers (3) EN ENEG
PR: CEG 4011 or CI. Both routine and advanced forms of soil testing are covered. Emphasis is placed on procedures and application of results to design.

CEN 4020 Software Engineering (3) EN ESB
PR: EEL 4851C. An overview of software engineering techniques for building high quality software. Student will participate in a software development team.

CEN 4721 User Interface Design (3) EN ESB
An examination of factors influencing the usability of a computer system. Topics include input and output devices, graphic and multimedia interfaces, formats for interaction/communication between computer and user, and the evaluation of usability.

CES 3102 Structures I (3) EN EGX
PR: EGN 3331. Analysis of simple structural systems, both determinate and indeterminate. Introduction to the use of energy methods in indeterminate structures.

CES 4000 Structures and The Urban Environment for Non-Engineers 6A MW (3) EN EGX
This course is the best works of structural engineering to indicate how current technology and social context affects structural form, to familiarize students with relevant structural principles, and to introduce the concept of structural art.

CES 4141 Matrix Structural Analysis (3) EN EGX

CES 4151 Computer Aided Structural Design (3) EN EGX
PR: CES4141. Computer aided structural analysis and design using existing finite element program, static dynamic loading.

CES 4603 Concepts of Steel Design (3) EN EGX
PR: CES 3102. Introduction to steel design and AISC Manual of Steel Construction. Design of tension members, compression members; beams; beam columns; and bolted, welded, and riveted connections.

CES 4618 Structural Design Steel (2) EN EGX
PR: CES 4605. Design of structures made of steel.

CES 4702 Concepts of Concrete Design (3) EN EGX

CES 4704 Structural Design-Concrete (2) EN EGX

CES 4720 Capstone Structural/Materials Design (3) EN EGX
A Capstone Materials design experience for seniors in Civil and Environmental Engineering. This course will provide students with a focused design experience aimed to design for durability and reliability.

CES 4740 Capstone Geotechnical Structural Design MW (3) EN ENEG

CES 4742 Concepts of Structural Design (3) EN EGX
Introduction to concrete design and the ACI Building Code Requirement for reinforced concrete. Design of flexural reinforcement in beams and slabs, design of shear reinforcement, design of concrete columns, and design of steel beams.

CES 4820C Timber and Masonry Design (3) EN EGX
PR: CES 3102, CES 4702. Fundamentals of timber design including beams, columns, connections and formwork. Introduction to masonry design including design of beams, walls, columns, and masonry units.
CHM 2045 General Chemistry I Laboratory (1) AS CHM
PR: CHM 2045L. Laboratory portion of General Chemistry I. Introduction to laboratory techniques; study of properties of elements and compounds.

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

CHM 2046 General Chemistry II NS (3) AS CHM
PR: CHM 2045 or CHM 2045L or equivalent. Continuation of General Chemistry. Lec.-dis.

CHM 2046L General Chemistry II Laboratory (1) AS CHM
PR: CHM 2046L. Laboratory portion of General Chemistry II. Continuation of chemistry laboratory.

CHM 2200 Organic Chemistry (4) AS CHM

CHM 2210 Organic Chemistry I (3) AS CHM
PR: CHM 2046, CHM 2046L. Fundamental principles of organic chemistry laboratory.

CHM 2210L Organic Chemistry Laboratory I (2) AS CHM

CHM 2211 Organic Chemistry II (3) AS CHM
PR: CHM 2210 or equivalent. Continuation of organic chemistry. Lecture.
CHM 5225 Intermediate Organic Chemistry (3) AS CHM
PR: CHM 2211, CHM 2211L, or equivalent or CI or GS. This course will extend organic chemistry beyond the undergraduate level and will emphasize concepts of stereochemistry and reaction mechanisms.

CHM 5226 Intermediate Organic Chemistry II (3) AS CHM
PR: CHM 5225. An introduction to synthetic organic chemistry for graduate students and advanced undergraduates. Lec. Semesters II.

CHM 5425 Applications in Physical Chemistry (3) AS CHM
PR: CHM 4412 and CHM 4410 or CI or GS Applications of chemical theory to chemical systems.

CHM 5452 Polymer Chemistry (3) AS CHM
PR: Either CHM 2211, CHM 2211L, and CHM 3400 or CHM 4410 or graduate standing. Fundamentals of polymer synthesis, structure, properties, and characterization.

CHM 5621 Principles of Inorganic Chemistry (3) AS CHM
PR: CHM 4411, CHM 4610 or CI or GS Chemical forces, reactivity, periodicity, and literature in organic chemistry; basic core course.

CHM 5931 Selected Topics in Chemistry (1-3) AS CHM
PR: CI. The following courses are representative Offer somethat are taught under this title: Natural Products, Stereocchemistry, Reactive Intermediates, Photochemistry, Instrumental Analytical, Advanced Lab Techniques, Heterocyclic Chemistry, etc.

CHS 4300 Fundamentals of Clinical Chemistry (3) AS CHM
PR: BCH 3033. Theoretical and practical aspects of the analysis of various body fluids, with emphasis on the medical significance. Clinical chemistry majors must take CHS 4301L concurrently.

CHS 4301L Clinical Laboratory (2) AS CHM
PR: BCH 3033 and CI, CHM 3120C. CHS 4300 must be taken concurrently. Laboratory experience in some of the most important clinical determinations. CHS 4300 must be taken concurrently. Lec.-Lab.

CHS 4302 Clinical Chemistry Practice (2-12) AS CHM
PR: CI, S. Only Laboratory practice in clinical chemistry laboratories in the Tampa Bay area.

CIS 4250 Ethical Issues and Professional Conduct 6A MW
(3) EN ESB
PR: Senior standing in the Department of Computer Science and Engineering. An introduction to ethical issues arising in the computer sciences, through written analysis and oral presentations of technical situations which involve ethical conflicts.

CIS 4900 Independent Study in Computer Science (1-5) EN ESB
PR: CI. S/U only. Specialized independent study determined by the needs and interests of the student.

CJS 4100 Computer Science Project (2) EN ESB
Projects intended to develop individual interests and abilities in computer science involving either computer hardware or software aspects of a well defined proposal.

CJS 4930 Special Topics in Computer Science I (1-4) EN ESB
PR: CI, S/U only. Specialized independent study determined by the needs and interests of the student.

CJT 4100 Criminal Investigation (3) AS CJP
PR: CCJ 3024 or CCJ 3610 or CI. Covers the major components of criminal investigation, with special attention to the scientific aspects of criminal investigation and the management of major cases.

CLA 3103 Greek Civilization HP (3) AS CLA
Study of Greek Civilization from its beginning to the Roman period, with emphasis on social customs, political institutions, and daily life.

CLA 3123 Roman Civilization HP (3) AS CLA
Study of Ancient Roman Civilization with emphasis on social customs, political institutions, and daily life.

CLP 3003 Psychology of Adjustment SS (3) AS PSY
Not for major credit. Genetic, organic, and learned factors involved in the process of adaptation: applications of mental health principles to everyday living.

CLP 4143 Abnormal Psychology (3) AS PSY
PR: PSY 3213 with a grade of C or better, psychology major or CI. Descriptions, theoretical explanations, research evidence, and treatment of maladaptive behavior.

CLP 4414 Behavior Modification (3) AS PSY
PR: PSY 3213 with a grade of C or better or CI. Introduction to behavioral analysis, and application of learning principles, behavioral measurement, research design and interventions in treatment settings.

CLP 4433 Psychological Tests and Measurement (3) AS PSY
PR: PSY 3213 with a grade of C or better or CI. Students must not receive credit for both CLP 4433 and EDF 4430. A consideration of the instruments for intellectual and personality assessment including their applications, development, and potential abuses.

CLT 3040 Scientific and Medical Terminology (3) AS CLA
A course in the Greek and Latin word elements used in science and technology.

CLT 3101 Greek Literature in Translation 6A MW (3) AS CLA
Reading and discussion of major works in Greek literature. Special emphasis on the Iliad, the dramatists Aeschylus, Sophocles, Euripides and Aristophanes. Some attention is given to the social and political background of the works. All readings are in English.

CLT 3102 Roman Literature in Translation 6A MW (3) AS CLA
Reading and discussion of major works in Roman literature. Special emphasis is placed on the Aeneid, comedy and satire. Some attention is given to the political background of the works. All readings are in English.

CLT 3370 Classical Mythology HP (3) AS CLA
Study of Greek and Roman myths embodied in classical literature and of their impact on Western civilization. All readings are in English.

COM 3100 Introduction to Communication SS (3) AS SPE
Introduction to the roles, contexts, and issues in contemporary human communication. Required of Communication majors.

COM 3014 Communication, Gender and Identity (3) AS SPE
Examines the communicative origins and implications of gender roles.

COM 3110 Communication For Business and the Professions (3) AS SPE
For non-majors only. Identification of communication situations specific to business and the professions. Analysis of variables related to communication objectives and preparation of oral presentations in the form of informational reports, conference management, written reports, interviews, and public hearing.

COM 3120 Introduction to Communication Theory in Organizations (3) AS SPE
PR: majors, COM 2000 or CI, non-majors, COM 3122 or COM 3110 or CI. A survey of major communication concepts which impact upon organizational effectiveness.

COM 3122 Interview Communication (3) AS SPE
Student must sign up for a one-hour lab if registering for day-time mass lecture course. A study of communication theory related to interview situations with emphasis on the employment interview, appraisal interview, and persuasive interview. Student must sign up for a one-hour lab unless registering for night section of 3122.

COM 3122L Interview Communication Lab (0) AS SPE
Student must take this lab in conjunction with the mass lecture COM 3122 offered during day. Interview laboratory practice for personal and individual consultation. Open to majors and non-majors.

COM 4020 Communicating Illness, Grief, and Loss 6A (3) AS ESB
PR: Junior/Senior standing or CI. Focus on stories of illness, grief, and loss to make sense of these experiences; to understand the cultural and rhetorical influences on how stories are told, and to explore the context of everyday life, romantic relationships, families, institutions, and culture in which they occur.

COM 4022 Health Communication (3) AS SPE
PR: GS. Application of communication theory and research to the health context including health behavior, patient-physician communication, health information campaigns, and health beliefs and behavior. Special attention to the value issues in health communication.

COM 4030 Women and Communication 6A MW (3) AS SPE
Examines women's unique communication in a variety of contexts. Also offered under Women's Studies.

COM 4124 Communication and Organizational Change (3) AS SPE
PR: COM 3120 or CI. An advanced course covering current issues in organizational transformation (e.g., organizational dialogue, learning organizations, reengineering, work teams), and the role communication processes play in such changes.

COM 4710 Writing Lives 6A (3) AS SPE
PR: Junior/Senior standing or CI. Focuses on writing about our lives and the lives of others as a way to understand, cope with and communicate social experiences.

COM 4842 Communication Intern Seminar (3) AS SPE
PR: majors, Communication major, minimum GPA 3.0, 75 hours completed, 15 hours of core requirements and 9 elective hours completed, and CI. Seminar provides students with an opportunity to put into practice concepts and skills acquired in their study of communication. Weekly seminars examine essential communication for seminar must be submitted one semester prior to seminar offering.

COM 5930 Topics in Communication Studies (3) AS SPE
Topics issues in communication.

COP 2000 Computer Science Laboratory (1) EN ESB

COP 2002 Introduction to Computer Science (3) EN ESB
CR: COP 2000L. Introduction to the concepts of algorithmic formulation of problems for computer solution and the general abstract
COP 2120 SC Cobol Programming I (3) EN ESB

COP 2121 SC Cobol Programming II (3) EN ESB
PR: COP 2120. Advanced applications of ANSI Standard COBOL. Development of subroutines, relative I-O and data base applications as used in a comprehensive data processing environment.

COP 2200 SC Fortran Programming (3) EN ESB
PR: COS 2100. An introduction to FORTRAN. Solution of scientifically oriented problems using the FORTRAN language. Particular emphasis is placed on file manipulation and system libraries.

COP 2400 Computer Systems (3) EN ESB
PR: COP 2000L. Principles of computer organization, machine and assembly programming languages.

COP 2510 Programming Concepts (3) EN ESB
PR: COP 2000L. An examination of a modern programming language emphasizing programming concepts and design methodology.

COP 3311 Program Design (3) EN ESB
PR: EEL 4851C. An introduction to programming languages, survey of language types and design of translators and interpreters.

COP 4023 Comparison Of Programming Languages (3) EN ESB
PR: EEL 4851C. A comparative study of procedural and nonprocedural computer languages, emphasizing the fundamental differences in information binding, string and data structures manipulation, control structures and different languages.

COP 4020 Programming Languages (3) EN ESB
PR: EEL 4851C. An introduction to programming languages, survey of language types and design of translators and interpreters.

COP 4313 Symbolic Computations in Mathematics 6A (3) AS MTH
PR: MAS 3105 and MAP 2302 Students will write programs to solve problems in various areas of mathematics including calculus and linear algebra with symbolic programming systems such as Maple, Mathematica, or Macsyma.

COP 4600 Operating Systems (3) EN ESB
PR: EEL 4851C. Introduction to operating systems. Design of operating systems. Concurrent processing, synchronization, and storage management policies.

COT 3100 Introduction to Discrete Structures (3) EN ESB
PR: MAC 2281 or equivalent. Introduction to set algebra, propositional calculus, and finite algebraic structures as they apply to computer systems.

COT 4210 Introduction to Automata Theory and Formal Languages (3) EN ESB
PR: ENG 4100. Introduction to the theory and application of various types of computing devices and the languages they recognize.

COT 4400 Analysis Of Algorithms (3) EN ESB
PR: EEL 4851C. Design principles and analysis techniques applied to various classes of computer algorithms frequently used in practice.

CPO 2002 Introduction to Comparative Politics SS (3) AS POL
Comparison and analysis of representative European and non-Western political systems.

CPO 4034 Politics of the Developing Areas SS AF (3) AS POL
An analysis of the ideologies, governmental structures, and political processes of selected nations of the non-Western world.

CPO 4024 Government and Politics of Africa SS AF (3) AS AFA
Designed to provide the information and analytical tools necessary to interpret current Sub-Saharan African politics. Survey of political organization in traditional African societies; politics under colonial rule; the struggle for independence, and post-independence politics.

CPO 4930 Comparative Government and Politics of Selected Countries or Areas (3) AS POL
Study of political systems with common elements. Structure, process, domestic and foreign politics, and regional roles are considered.

CPO 5934 Selected Topics in Comparative Politics (3) AS SR
Pr: Sr./ GS Studies specific substantive areas in Comparative Politics, such as political economy or the politics of specific countries or regions.

CWR 3111 Narration and Description 6A (3) AS ENG
A study of narrative and descriptive techniques in prose. By making the student sensitive to language usage, it is designed to bridge the gap between expository writing and imaginative writing.

CWR 3111 Form and Technique of Fiction 6A (3) AS ENG
A study of short narrative forms such as the anecdote, tale, character sketch, incident, monologue, epistolary story, and short story as they have been used in the development of fiction and as they exist today.
DAA 2500 Fundamentals Of Jazz Dance (2) FA DAN
A basic movement course in Jazz Dance involving; dance vocabulary, alignment, styles and simple rhythmic movement patterns.

DAA 2504 Jazz Dance (2) FA DAN
PR: Admission by placement audition, DAA 3204 or DAA 2104. A technique class for the intermediate-level dancer to become acquainted with the dance styles and forms of musical theatre and concert jazz dance. Emphasis is on highly stylized movement on a strong rhythmic base.

DAA 2540 Theatre Dance Styles (2) FA DAN
PR: DAA 2100 or DAA 2200 or CI. Development of technical skills in social and historical dance forms frequently stylized for use by dance choreographers. Forms to be studied will include polka, waltz, tap dancing.

DAA 2570 Jazz Theatre Dance (3) FA DAN
PR: Admission by placement audition and DAA 3502. Continuation of DAA 3502. Further emphasis on projection, phrasing, rhythmic patterns and dynamics. Solo and ensemble studies leading to performance.

DAA 3108 Modern Dance II (3) FA DAN
PR: Admission by placement audition. Study of principles of modern dance technique. Practical work in exercises and movement phrases, utilizing changing rhythms and dynamics. Concert and performance attendance required.

DAA 3109 Modern Dance III (3-4) FA DAN
PR: Admission by placement audition. Continuation of DAA 2104. Further emphasis on style and phrasing. Work on projecting mood and quality by dancing and rehearsing. Development of advanced choreography, leading to performance.

DAA 3204 Ballet II (3) FA DAN
PR: Admission by placement audition. Positions and barre exercises. Emphasis on correct alignment of the body and the application of simple step combinations in centre work. The use of ballet vocabulary (French terms). Material is covered almost totally as practical work in class with a few outside projects. Concert and performance attendance required.

DAA 3209 Ballet III (3-4) FA DAN

DAA 3294 Ballet Variations. (1) FA DAN
PR: DAA 3209. This course provides instruction in various forms of ballet. Semester courses include: Pointe technique, Men’s Class, Character Dance, Spanish Dance and Partnering. Ballet majors are required to complete two semester hours.

DAA 3394 World Dance Topics (1) FA DAN
Students will explore in depth fundamental knowledge of dance representing various world cultures. In addition to a dance/movement component, a connection will be made to historical, spiritual/religious, ethnological and environmental indigenous aspects of peoples involved in dance as a cultural experience. May be repeated up to 4 credit hours.

DAA 3614 Choreography I (2) FA DAN
PR: DAA 2111. CR: DAA 2104 or above. Study and execution of basic principles of composition, Preparation of studies in theme and variations, breath, phrases and metric phrases.

DAA 3615 Choreography II (2) FA DAN
PR: DAA 3614 or CI. Preparation of studies in rhythm, dynamics, form and motivation.

DAA 3624 Dance Improvisation (2) FA DAN
For majors and non-majors. Exploring various methods of spontaneously creating dance movement in individual and group situations. Structured and unstructured approaches will be explored.

DAA 3644 Repertory (1) FA DAN
PR Admission by audition or CC. The development and performance of solo and/or group dances.

DAA 3686 Performance (1) FA DAN
PR: Admission by audition or CC. Open to all university students proficient in dance techniques and concurrently enrolled on Technique. Rehearsal and performance of works presented by the department.

DAA 3806 Movement Analysis (2) FA DAN
Specialized study in movement theories, body alignment, and movement patterns focusing on the scientific and analytical basis of movement in dance with consideration for developmental processes, technique, creative expression, and performance.

DAA 4206 Ballet III (4) FA DAN
PR: Admission by placement audition or CI. Perfecting the execution of barre work. Intensification of centre work. More stress on aesthetic quality of movement and phrasing. Students expected to be proficient in points work. Outside projects, concerts, and performances are required.

DAA 4617 Choreography IV (2) FA DAN
PR: DAA 4702. The student will prepare studies based on free form, minimal art, and chance methods.LEC-lab, reading.

DAA 4702 Choreography III (2) FA DAN
PR: DAA 3615 or CI. CR: DAA 3109 or above. Work directed toward duets and group dances. The students will submit choreographic ideas for instructor’s approval, then proceed with rehearsals. LEC-lab, reading. Rehearsal hours to be arranged.

DAA 4790 Senior Project (1) FA DAN
PR: senior Major, CI, CC. The creation of an original group work and solo within the senior concentration—ballet or modern. To be performed and presented with the concurrence of a faculty advisor.

DAA 4920 Dance Studies (1-4) FA DAN
PR: CI and CC. Dance Major status. Individual study to extended competency in technique and performance of Dance through participation in special workshops.

DAE 3351 Ethnic/Folk Dance (2) FA DAN
An exploration of ethnic and folk dance forms in various cultures of the eastern and western hemispheres. Students will investigate ways of doing, making, and teaching dances through studio work, videos, performances, and readings.

DAE 4300 Dance Pedagogy: Theory And Practice (3) FA DAN
PR: CI, CC. Designed to provide prospective teachers with opportunities to develop concepts of pedagogy based on principles of teaching/learning dance. Specific sections will focus on Secondary Curriculum and Methods and on Pre-K and Elementary Methods.

DAN 4132 Special Studies Dance Education (3) FA DAN
PR: CI and CC. Designed to provide prospective dance teachers with opportunities to develop concepts of pedagogy based on principles of teaching/learning in dance techniques and choreography. May be repeated up to 9 credit hours.

DAE 4936 Senior Seminar in Dance Education (2) FA DAN
CR: DAE 4940. This course represents a synthesis of the teacher Candidate’s courses and is required concurrently with the internship.

DAN 4940 Internship in Dance Education (1-12) FA DAN
CR: DAE 4936. S/U only. One full semester of internship in a public or private school. In special programs where the intern experience is distributed over two or more semesters, students will be registered for credit which will be based on hours from 9 to 12 semester hours.

DAN 2100 Introduction To Dance 6A FA (3) FA DAN
For majors and non-dance majors, a study of the art and language of dance through lectures, discussions, concert attendance, and studio practice. Designed to develop awareness and insight of this art form through discussion, observation, writing, and movement experience.

DAN 2160 Entry Seminar (2) FA DAN
This is a study of dance-related career opportunities through talks and assigned reading. This course will aid majors in understanding dance as an aesthetic art form through discussion and critical evaluation.

DAN 2610 Music For Dance (2) FA DAN
PR: DAN 2810 or CI. Development of musical skills in movement studies. Continued study of the inter-relationship of music and dance through movement experiences, observations, video, and writing.

DAN 3420 Introduction to Laban Movement Analysis (3) FA DAN
Laban Movement Analysis is a system which enables one to see, describe and learn movement in a clear, efficient and objective manner. Space, shape, dynamics and human development patterns are categories which are studied by means of lecture, improvisational movement and reading materials.

DAN 3584 Practicum In Dance Production (1-2) FA DAN
A practicum in mounting dance concerts with shop work and business participation. Intended for students working in costuming, set preparation, light presentation, stage management and production crew. Dance majors must have at least 2 credits for graduation accumulated in two different semesters. 40 hour lab required.

DAN 4134 Dance History Though the 19th Century 6A XLW (3) FA DAN
Designed for majors and non-majors, this course will present a comprehensive view of the evolution of dance as an art form from its origins through the 19th Century. It is designed to develop awareness and insight through lecture, discussion, video, observation and writing.

DAN 415 20th Century Dance XMW (3) FA DAN
Designed for majors and non-majors, this course will trace the development of dance as an art form in the 20th Century. It is designed to develop awareness and insight through lecture, discussion, video, observation and writing. Students will be required to attend at least two dance performances.
ECO 4914 Independent Research (1-3) BA Ecn
PR: Cl. Individual study contract with instructor and department chairperson required. The research project will be mutually determined by the student and instructor.

ECO 4935 Selected Topics in Economics (1-3) BA Ecn
PR: Cl. Topics to be selected by the instructor or instructors on pertinent economic issues.

ECP 2001 Survey of Micro and Macroeconomics (3) BA Ecn
A condensed introductory course in microeconomics and macroeconomics, intended for pre-business students. This course and ECO 2023 cannot both be taken for credit.

ECP 3502 Environmental Economics (3) BA Ecn

ECP 3831 The Economics of Women and Work (3) BA Ecn
PR: ECO 1000, ECO 2013 or ECO 2023. Survey of research on women, men and work in the labor market and the household. Focuses on the economic status of women. Includes historical perspective, examination of the family as a domestic and economic unit, changing work roles, gender differences in occupation and earnings.

ECP 3823 Labor Economics (3) BA Ecn
PR: ECO 3101 with a grade of "C" or better. Determinants of wage and employment levels: occupation, industrial and geographical wage differentials, union and public policy effects on labor markets, the economics of discrimination; inflation and unemployment.

ECP 3832 Environmental Economics (3) BA Ecn

ECP 4313 Economics of Regulation and Antitrust (3) BA Ecn

ECP 4550 Economics of Crime (3) BA Ecn
PR: ECO 3101 with a grade of "C" or better. Advanced analysis of the economic impact of tort, criminal, property and contract law as well as in the formation and adjudication of law.

ECP 4570 Economics of Health (3) BA Ecn
PR: ECO 3101 with a grade of "C" or better. Application of economic methods to health care topics. Demand for medical care, public and private health insurance; physician and hospital supply of medical care; government regulations and national healthcare systems.

ECP 4590 Comparative Economic Systems (3) BA Ecn
PR: ECO 1000 or ECO 2013 or Cl. Economic analysis of cities and urban social problems. Poverty, discrimination, housing, transportation, pollution, crime and fiscal considerations.

ECP 4641 Law and Economics (3) BA Ecn
PR: ECO 2023 with a grade of "C" or better. Advanced analysis of the economic impact of tort, criminal, property and contract law as well as in the formation and adjudication of law.

ECP 4591 Education and Economic Development (3) BA Ecn
PR: ECO 1000 or ECO 2013 or Cl. The major economic systems: traditional, capitalism, democratic socialism, communism and fascism.

ECO 4713 International Monetary Relations (3) BA Ecn
PR: ECO 3203 Advanced analysis of international macroeconomic relationships. Foreign exchange market, international monetary system, balance of payments.

ECO 4723 International Commercial Policies (3) BA Ecn
PR: ECO 3101 with a grade of "C" or better. Advanced analysis of international trade theory and commercial policy, international economic integration, multinational enterprise.
elementary school.

EDE 4941 Childhood Education Internship Level I (3) ED EDE
PR: Admission to the Elementary Education. CR: RED 3410, EDE 4620. Concurrent enrollment in EDE 4620-Elementary section. S/U only. Students spend six hours per week in a supervised inservice experience and attend weekly seminar.

EDE 4942 Childhood Education Internship Level II (6) ED EDE
PR: EDE 4941, RED 4310, EDE 4620, EDE 4822, LAE 4314, EDE 4301, MAE 4310, SCE 4310, LAE 4414, SSE 4313, EME 2040. S/U only. Students spend 12 hours per week in a supervised internship experience and attend weekly seminars. CR: RED 3410. EDC 4005: Introduction to Education and Field Experience (3) EDC 4005
Introductory survey course required for admission into the College of Education. A broad overview of the history, sociology and philosophy of education in the United States focuses on education as a field of study and teaching as a profession. Includes lecture and field experience.

EDE 3122 Learning and the Developing Child (3) EDE
PR: General psychology and admission to College of Education. Preadolescent child growth and development, learning theory, and behavioral analysis applied to instruction and to the organization and management of classroom.

EDE 3214 Human Development And Learning (3) ED EDE
PR: General psychology and admission to College of Education. Application of respondent and operant learning principles to classroom learning, teaching models for different instructional goals, analysis of teacher behavior, micro-teaching.

EDE 3229 Human Behavior and Environmental Selection 6A MW (3) ED EDE
Learning principles, behavior analysis applied to global environmental and social issues. Requires elementary computer word processing skills.

EDE 3542 Philosophy of Education MW (4) ED EDE
PR: Upper level standing. A study of philosophy of education with an emphasis on aspects that are relevant to an understanding of the principles and policies of American education.

EDE 3604 Social Foundations of Education MW (3) ED EDE
PR: Upper level standing. Social, economic and political context within which schools function and the values which provide direction for public education.

EDE 4111 Child Growth and Learning (3) ED EDE
An introduction to child development and learning from an educational and psychological perspective. Emphasis is on the application of relevant constructs as they would reflect developmentally appropriate practices in early childhood learning settings.

EDE 4131 Learning And The Developing Adolescent (3) ED EDE
PR: General psychology and admission to College of Education. Adolescent growth and development, learning theory, and behavioral analysis applied to instruction and to the organization and management of the classroom.

EDE 4430 Measurement For Teachers (3) ED EDEQ
PR: Upper level standing. Concepts and skills related to designing and developing classroom tests; evaluating tests, instruction, and student progress; and communicating student achievement. Including application of performance assessment techniques and computer applications for measuring and assessing pupil progress.

EDE 4905 Independent Study: Educational Foundations (1-4)
ED EDE
PR: DPR, S/U only. Specialized independent study determined by the student’s needs and interests.

EDE 4909 Directed Study: Educational Foundations (1-3) ED EDE
PR: Senior Standing. Offered only as a scheduled class. To extend competency in teaching.

EDE 5138 Adolescence (4) ED EDE
Study of the educational, intellectual, personal, physical, social and vocational factors in adolescence and their importance for school personnel.

EDE 5258 Programmed Instruction and Teaching Machines (3) ED EDE
Principles for programming in several academic subjects.

EDG 2701 Teaching Diverse Populations and Field Experience (3) ED EDE
Introductory survey course required for admission into the College of Education. Places schools and teaching within the context of the U.S. as a pluralistic society. Topics include: the demographics of diversity; prejudice; elements of culture; American heritage of diversity and its value; and barriers to cultural understanding. Includes lecture and field experience.

EDG 4320 Introduction to Creative Drama (3) FA EDE
This course for classroom teachers introduces the theory and practice of creative drama as it applies to use by elementary, middle school and secondary school teachers. Beginning with a study of dramatic play as it relates to human development, the course includes basic strategies when using pantomime, voice improvisation, theatre games, and role playing and story dramatization.

EDG 4620 Curriculum and Instruction (3) ED EDE
An introduction to the field of curriculum and instruction. Emphasis is placed on principles of curriculum development and use of instructional strategies. Students will develop, implement, and evaluate a variety of lesson plans.

EDG 4904 Directed Study (1-4) ED EDE
PR: Senior standing. Offered only as a scheduled class. Department permit required. To extend competency in teaching field.

ECC 2000 Introduction to Early Childhood Education (3) ED EDE
An overview of early childhood education with emphasis on its historical development, current theories, and practices.

ECC 4008 Literature in Early Childhood Education 6A LW (3) EDEU
Jr/Sr. Standing Emphasis is placed on developing knowledge of literature for younger children (0-8 yrs.) and methodologies and strategies for utilizing literature to teach literacy in current areas of the curriculum.

ECC 4203 Programs for Young Children (3) ED EDEU
PR: Admission to College of Education. Early Childhood majors only. Develops students’ understanding of historical and social foundations of early childhood education, establishing professional beliefs regarding teaching young children, and developing an appropriate learning environment.

ECC 4211 Integrated Curriculum: Science and Mathematics (3) ED EDEU
PR: Admission to College of Education, EDF 4111. Early Childhood majors only. Develops an understanding of science and mathematical concepts for the appropriate stages of cognitive development of young children. Emphasis will be placed on how science and mathematics are integrated throughout the curriculum and become valuable functional tools.

ECC 4212 Integrated Curriculum: Social Sciences/Humanities & Art (3) ED EDEU
PR: Admission to College of Education, EDF 4111. Early Childhood majors only. Develops an understanding of appropriate curriculum experiences in social science, humanities, and arts for kindergarten and primary grades with an emphasis on integrated experiences, and sociological influences such as culture, ethnicity, language and gender impact understandings, values, and learning.

ECC 4300 Cognitive Experiences for Young Children (3) ED EDEU
PR: Admission to College of Education, EDF 4111. Early Childhood majors only. Emphasizes theoretical and practical aspects of cognitive development for children ages 3 through 6 with focus on planning integrated experiences and content in science, mathematics, and social sciences.

ECC 4303 Creative and Affective Experiences for Young Children (3) ED EDEU
PR: Admission to College of Education. Early Childhood majors only. Develops students’ understandings of young children’s creative expression through art, music, movement, play and drama. Emphasizes how to plan, implement, and evaluate appropriate learning experiences as well as selection of appropriate instructional materials.

ECC 4408 Child, Family & Teacher Relations (3) ED EDEU
PR: Admission to College of Education, EDF 4111. Early Childhood majors only. Focuses on developing an understanding of traditional and non-traditional families, structural and life style variations and parenting in diverse cultures and at-risk families. Implications from these understandings will guide development of a parent involvement plan that includes effective ways to communicate with parents, conference with parents, and plan parent meetings and home visits.

ECC 4706 Language and Emerging Literacy (3) ED EDEU
PR: Admission to College of Education, EDF 4111. Early Childhood majors only. Provides knowledge of language development and emerging literacy for typical and atypical development in children from birth to third grade, including ESOL children.

ECC 4905 Independent Study: Early Childhood Education (1-4)
ED EDEU
PR: S/U only. Early Childhood majors only. Specialized independent study determined by the student’s needs and interests.

ECC 4909 Directed Study: Early Childhood Education (1-3) ED EDEU
PR: Senior standing. To extend knowledge in teaching field.
EEL 4936 Senior Seminar in Elementary Early Childhood Education (2) EN EGE

EEC 4940 Internship: Early Childhood (10) ED EGU CR: EEC 4936. S/U only. Teacher candidate is required to demonstrate professional competence during one semester of full-day internship in a public or private elementary school.

EEC 4941 Field Experience I (3) ED EGU PR: Admission to College of Education. Early Childhood majors only. Field placement with three to four children who meet the teacher candidates have opportunities to apply knowledge and skills in authentic situations and become objective observers of young children’s development. Weekly seminars are conducted in conjunction with the experiences to provide teacher candidates with an opportunity for reflection on their understandings.

EEC 4942 Field Experience II (3) ED EGU PR: Admission to College of Education, EDF 4111. Early Childhood majors only. Field placement in kindergarten or primary grade where teacher candidates have opportunities to apply knowledge and skills in authentic situations. Emphasis on developing deeper understanding of children’s development and implications for program planning for both typical and atypical children.

EEL 4843 Field Experience III (3) ED EGU PR: Admission to College of Education, EDF 4111. Early Childhood majors only. Field placement in kindergarten or primary grade where teacher candidates have opportunities to apply knowledge and skills in authentic situations. Focus is on developing deeper understanding of growth and development and relationship to curriculum planning with an emphasis on self-evaluation of knowledge, skills, and dispositions essential for teaching.

EED 4011 Introduction to Behavior Disorders (3) ED EDS PR: EEX 4011, or equivalent or DPR. Survey of emotional, behavioral and social disorders in children and youth. History of the field, definitions, classifications, theoretical approaches, intervention techniques, classroom management, service delivery models, trends and issues.

EED 4909 Directed Study: Behavior Disorders (1-3) ED EDS PR: Senior standing. To extend competency in teaching field.

EEL 4701 Undergraduate Supervised Practicum In Behavior Disorders (1-6) ED EDS PR: EEX 4011. S/U only. DPR. Supervised field experience in assessment, classroom management, and clinical teaching with children who have emotional and behavioral disabilities.


EEL 3302 Electronics I (3) EN EGE PR: EGN 3373. A course in the physical principles of electronic devices with emphasis on semiconductor electronics. Includes the analysis and design of amplifiers and switching circuits.

EEL 4305 Electronics II (3) EN EGE PR: EEL 3302. Provides further study in the analysis of linear networks and systems. Includes time and frequency domain points of view. Laplace, Fourier and superposition integrals.

EEL 4163 Computer Aided Design and Analysis (2) EN EGE PR: EEL 3302, EEL 4705. The emphasis is upon applications and how to use the major CADA programs as effective tools to solve a wide variety of engineering problems. The coverage includes solid state devices, systems analysis, digital logic, and transfer function solutions.

EEL 4305 Electronics II (3) EN EGE PR: EEL 3302. Provides further study in electronic circuits. Includes feedback and frequency response techniques in amplifier design.

EEL 431C Semiconductor Devices (3) EN EGE PR: EEL 3302. An introduction to the fundamentals of semiconductor materials and semiconductor device operation.

EEL 4411 Fields And Waves II (3) EN EGE PR: MAP 2302, PHY 2049, PHY 2049L. A basic introduction to electromagnetic field theory, including static and dynamic electromagnetic fields.

EEL 4511 Communication Engineering (2) EN EGE PR: EEL 4610. Analysis of telephony; telephone network; digitalization. Digital transmission and multiplexing. Digital switching; space division switching, time-division switching, space-time switching; analog environment. Broadcasting and recording (audio and video); television systems, cable and satellite TV.

EEL 4512C Introduction to Communication Systems (3) EN EGE PR: EEL 3100. Signals and Fourier transforms in communication systems; measure of information in signals. AM, FM, and PM modulation and demodulation systems. Sampling, quantization and PCM. Data communication; terminals, and modems; repeaters, timing circuits, and interfaces. Local networks.

EEL 4567 Electro-Optics (3) EN EGE PR: EEL 3301L, EEL 3302L, EEL 3410. An introduction to the field of electro-optics, including visible and infra-red sources and detectors, radiometry, optical and electronic components, and fiber optics.


EEL 4705 Logic Design (3) EN ESB PR: EGN 3373, CR: EEL 4705L, for CS & E students CR or PR: COP 2002. Binary number systems; truth functions; Boolean algebra; canonical forms; minimization of combinational logic circuits; synchronous logic circuits in computers.

EEL 4705L Logic Laboratory (1) EN EN EGU CR: EEL 4705.

EEL 4743L Microprocessor Laboratory (1) EN ESB CR: EEL 4744. Laboratory for microprocessor use and evaluation.


EEL 4748 Microprocessor-Based System Design and Application (3) EN ESB PR: EEL 4744, EEL 4743L. Study of techniques for design of microprocessor-based systems used in various applications. Includes a project on development of an experimental application system.

EEL 4756 Signal and Image Processing (3) EN ESB Sampling and quantization of signals and images; frequency-domain representations; filtering, convolution, and correlation; raster scanning and interfacing; color images; fast methods and parallelism; multi-rate processing; information signals.

EEL 4781C Distributed Processing and Computer Networks (3) EN ESB PR: COP 4600, CDA 4100. Design and analysis of distributed processing systems. Covers communication hardware and software, network operating systems, and reliability enhancement techniques.

EEL 4851C Data Structures (3) EN ESB PR: COP 2002, COP 2000L. Fundamentals of data organization for purposes of program efficiency, clarity and simplicity will be addressed.

EEL 4852C Data Base Systems (3) EN ESB PR: EEL 4851C. Fundamentals of data base management systems. CODASYL, network, hierarchical, and relational data base systems are analyzed, and typical applications are presented.

EEL 4805 Independent Study (1-5) EN EGE PR: CI. S/U only. Specialized independent study determined by the students’ needs and interests.

EEL 4906 Design Project MW (2) EN EGE PR: Senior standing. Required of all electrical seniors. An individual or team project involving the design of an electrical component system.

EEL 4935 Special Electrical Topics I (1-4) EN EGE
EEL 4936 Special Electrical Topics II (1-4) EN EGE
EEL 4937 Special Electrical Topics III (1-4) EN EGE

EEL 5250 Power System Analysis (3) EN EGE Analysis technique for AC power systems.

EEL 5344C Digital CMOS/VLSI Design (3) EN EGE PR: EEL 4705 or GS Design, layout, simulation, and test of custom digital CMOS/VLSI chips, using a CMOS cell library and state-of-the-art CAD tools. Digital CMOS static and dynamic gates, flip flops, CMOS array structures commonly used in digital systems. Top down design example of a bit slice processor.

EEL 5356 Integrated Circuit Technology (3) EN EGE PR: EEL 4351 or GS Physics and Chemistry of integrated circuit and discrete device fabrication, materials limitations, processing schemes, failure and yield analysis. A laboratory is integral to the course.

EEL 5357 Analog CMOS/VLSI Design (3) EN EGE PR: EEL 4305 or GS Design of analog circuits for CMOS/VLSI design. Op amps, comparators, D to A and A to D converters. Switched
capacitor filters. Analog simulation.

EEL 5382 Physical Basis Of Microelectronics (3) EN EGE
PR: EEL 3410 or GS Quantum mechanics with emphasis on electronic properties in atoms, molecules, and crystals; quantum statistics; energy band theory; crystal structures; defect chemistry; semiconductor devices.

EEL 5437 Microwave Engineering (3) EN EGE
PR: EEL 4411, EEL 4102, or GS Introduction to passive and active components, devices, and circuits, including transmission lines and waveguides, employed in microwave integrated circuits and systems.

EEL 5462 Antenna Theory (3) EN EGE
PR: EEL 4411 or GS Antenna theory beginning with fundamental parameter definitions and continuing with mathematical concepts, elementary antennas and array patterns.

EEL 5772C Local and Metropolitan Area Networks (3) EN EGE
PR: EEL 6534 or EEL 4512 or GS Basics of data communication exchange of digital information over communication media. Basics of LANs/MANs and its components: media topologies, access methods, etc.; LAN/MAN architectures and protocols—IEEE 802.x/LAN Standards; High speed LANs such as FDDI, IEEE 802.6 MAN, etc., Internetworking, LAN/MAN Design and selections.

EEL 5631 Digital Control Systems (3) EN EGE
PR: EEE 4657 or GS Sample data and digital control processes.

EEL 5754C Microprocessor Based Digital Signal Processing (3)EN EGE
PR: EEE 4705 or GS Arithmetic systems, processing structures, efficient algorithms. DSP hardware, TI, NEC and other DSP microprocessors; multiprocessor hardware and software. System development. Application to telecommunications and voice processing.

EEL 5771 Introduction to Computer Graphics I (3) EN ESB
PR: CI, majors only An introduction to the evolution of computer graphics including point-piloting, line drawing, two-dimensional transformations software packages.

EEL 5935 Special Electrical Topics I (1-3) EN EGE
EEL 5936 Special Electrical Topics II (1-3) EN EGE
EEL 5937 Special Electrical Topics III (1-3) EN EGE

EEX 4011 Foundations of Special Education (3) ED EDS
DFP. Characteristics and needs of children who have learning disabilities, emotional disabilities, hearing impairments, mental retardation, physical handicaps, speech impairments, visual limitations, and who are gifted and talented.

EEX 4070 Integration of Exceptional Students in the Regular Classroom (2-3) ED EDS
No credit for department majors. Designed for non-special education majors. Includes basic identification techniques and strategies to promote academic and social integration and interaction of "mainstreamed" exceptional students. Concurrent field experience projects are included.

EEX 4221 Educational Assessment of Exceptional Students (3) ED EDS
PR: EDF 3214 and EEX 4011. Taken concurrently with EED 4941, ELD 4941, or EMR 4941 and EEX 4846. DPR. Introduction to assessment of exceptional students through formal and informal techniques. Emphasis placed on the interpretation of information for educational, programming and individualization of instruction.

EEX 4243 Education of the Exceptional Adolescent and Adult (3) ED EDS
PR: EEX 4011 or equivalent or DPR. Procedures for implementing educational programs for exceptional adolescents and adults. Topics include service delivery, curriculum, academic remediation, advocacy, utilization of ancillary services, alternative programs, and community resources.

EEX 4804 Behavior Management for Special Needs and at Risk Students (3) ED EDS
PR: EEX 4011. Taken concurrently with EED 4941, ELD 4941, or EMR 4941. Techniques to prevent, analyze, and manage challenging and ineffective classroom behavior as well as teaching social skills.

EEX 4742 Narrative Perspectives on Exceptionality: Cultural and Ethical Issues 6A LW (3) ED EDS
This course is designed to use literature as a way to interpret the lives of individuals with disabilities, their families and those who play an educational role in their lives. The course also addresses cultural and ethnic diversity so as to better analyze the role of ethics and values in decisions made pertaining to individuals with disabilities.

EEX 4846 Clinical Teaching in Special Education (3) EDS
PR: EEX 4011. Taken concurrently with EED 4941, ELD 4941, or EMR 4941 and EEX 4221. DPR. Effective teaching principles, instructional management procedures, and specialized teaching techniques for exceptional students.

EEX 4905 Independent Study: Exceptional Student Education (1-3) ED EDS
PR: DPR. S/U only. Specialized independent study determined by the student's needs and interests.

EEX 4909 Directed Study: Exceptional Student Education (1-3) ED EDS
PR: Senior standing. DPR. To extend competency in teaching field.

EEX 4936 Senior Seminar in Exceptional Student Education (2) ED EDS

EEX 4940 Internship: Exceptional Student Education (1-10) ED EDS
CR: EEX 4936. S/U only. One full semester of internship in an accredited public or private school.

EEX 5705 Seminar in Preschool Handicapped (2) ED EDS
Fall and Spring Semesters. Intended to familiarize the education student with the wide range of needs and services of the preschool children with disabilities and their families and how they coordinate with educational services.

EEX 5752 Working With Families: A Pluralistic Perspective (3) EDEDS
PR: Introductory course in special education, GS. Spring Semester. The impact of the socio-cultural environment on the education of at-risk children and children with disabilities; family systems theory, principles of multi-cultural, strengths-based approach, effectively with families of school-age children, diverse cultures and family structures represented in school populations today.

EGI 5051 Nature and Needs of the Gifted (3) ED EDS
Fall. This survey course examines the characteristics and educational needs of children and youth who are gifted, including those from special populations. Emphasis is on giftedness as defined historically, nationally and locally. The course also explores changing views of intelligence and talents related to policy and practice in gifted education as well as the processes of identification and programming.

EGI 5325 Theory and Development of Creativity (3) ED EDS
Explore 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.

EGI 5341 History of Technology: HP (3) EN EGB
Covers the evolution of technology and its influence on society from pre-historic man to the modern day. Topics include: seven technological ages of man, methods of producing power, materials, transportation, communication and calculation, and technology and society.

EGN 2082 History of Electrotechnology HP (3) EN EGB
PR: EGN 2049 or EGN 2054. Highlights of the history of electrotechnology and its relation to the development of civilization. The contributions of Democritus, Franklin, Fourier, Maxwell, Edison, von Neumann, etc. in the context of the development of Western civilization. The impact of communications, electronics, and computers in the twentieth century.

EGN 2210 Computer Tools for Engineers (3) EN EGB
PR: MAC 2281. Students will be introduced to computer based engineering tools and their application to the solution of engineering problems. The programming language, FORTRAN, will be the most emphasized tool, but coverage will also be given to other engineering/mathematical tools such as equation solving tools and spreadsheets.

EGN 3000 Foundations of Engineering (1) EN EGB
CR: EGN 3000L. Introduction to the profession of engineering. Exposure to the different disciplines of engineering incorporate examples of tools and techniques used in design and presentation. EGN 3000L Foundations of Engineering Laboratory (2) EN EGB
CR: EGN 3000. Introduction to the profession of engineering. Exposure to the different disciplines of engineering incorporate examples of tools and techniques used in design and presentation. Laboratory excursions will include computer tools, engineering design, and presentation skills.

EGN 3311 Statics (3) EN EGB

EGN 3321 Dynamics (3) EN EGB

EGN 3331 Mechanics of Materials (3) EN EGB
PR: EGN 3311. Stress, strain, Hookes Law; torsion, beam, column analysis; combined stresses; inelastic effects, limit design. Lec.
EGN 3353 Basic Fluid Mechanics (3) EN EGB

EGN 3365 Materials Engineering I (3) EN EGB
PR: CHM 2046, EGN 3311. Structure and property relationships in engineering materials, i.e., metal, ceramic and polymer systems. Environmental effects are also treated.

EGN 3373 Introduction to Electrical Systems I (3) EN EGB

EGN 3374 Introduction to Electrical Systems II (3) EN EGB
PR: EGN 3373. Continuation of EGN 3373.

EGN 3375 Introduction to Electrical Systems III (3) EN EGB
PR: EGN 3373. Continuation of EGN 3373.

EGN 3433 System Dynamics (3) EN EGB
PR: EGN 3321, EGN 4450, PHY 2049. Dynamic analysis of electrical, mechanical, hydraulic and thermal systems; LaPlace transforms; numerical methods, use of computers in dynamic systems.

EGN 3443 Engineering Statistics I (3) EN EGB
PR: MAC 2282. An introduction to the basic concepts of statistical analysis with special emphasis on engineering applications.

EGN 3461C Engineering Economy I (3) EN EGB
A study in analyzing the economic limitations imposed on engineering activities using basic models which consider the time value of money.

EGN 3466 Materials Engineering II (3) EN EGB
PR: EGN 3365. Applications and structure property relationships of commonly used engineering materials. Steel, nonferrous alloys and their welding, heat treatment and processing. Introduction to ceramic and polymer materials.

EGN 4420 Numerical Methods of Analysis (2) EN EGB

EGN 4450 Introduction to Linear Systems (2) EN EGB
PR: MAC 2282. Study and application of matrix algebra, differential equations and calculus of finite differences.

EGN 4481 Technology and Society MW (3) EN EGB
Non-technical study of engineering activities; utilities, nuclear power, weapons, weaponry, space, etc. Students conduct individual in-depth study of environmental/ethical problem.

EGN 4503 Independent Study (1-5) EN EGB
PR: CI. Specialized independent study determined by the students' needs and interests.

EGN 4590 Special Topics in Engineering (1-3) EN EGB
PR: CI. New technical topics of interest to engineering students.

EGN 5421 Engineering Applications for Vector Analysis (3) EN EGB
Vector methods in electromagnetism and fluid mechanics. Vector operators, line and flux integrals, potential and transport theorems, applications.

EGN 5422 Engineering Applications of Partial Differential Equations (3) EN EGB

EGN 5423 Natural Networks and Mathematical Communication EN EGB

EGN 5424 Engineering Applications of Complex Analysis (3) EN EGB
Analytic functions, conformal mapping, residue theory. Laurent series, transforms. Applications to various problems in engineering and physics.

EGN 5425 Engineering Applications of Advanced Matrix Computations (3) EN EGB
Survey of theory and software for matrix computations: factorization methods, least squares and pseudoinverses, eigenvector algorithms. Special matrices and representations for control system and finite element applications.

EGS 1113 Introduction to Design Graphics (3) EN EGB
The student learns how to graphically represent technical designs using sketches, traditional drawing tools, and AutoCAD. The lab features twenty Pentium II computers running AutoCad R14.

EVT 3192 Technology Education and Society (4) ED EDB
Introduction to programs, facilities and opportunities in teaching Technology Education. Includes historical, current and futuristic implications of technology in society.

EVT 4360 Special Teaching Methods: Technology Education (3) ED EDB
Equips Technology Education instructors with professional competencies for classroom and laboratory settings. Includes the selection of appropriate methods, planning, and delivery of instruction, along with supervision of students in laboratory areas.

EIN 4312C Work Analysis (3) EN EGS
PR: EGN 3613C, EGN 3443; CR: AEC 3074. Operation analysis and workspace design, work measurement, standard data, ergonomic and labor costing.

EIN 4313C Human Factors (3) EN EGS
Design of man-machine systems, by taking into consideration both human and machine capabilities and limitations.

EIN 4335 Production Control (3) EN EGS
PR: ESI 4312C. Planning and control of production systems. Includes: forecasting and inventory control models, scheduling and sequencing, MRPII, CPM/PERT, and resource requirements.

EIN 4464C Facilities Design for Design Engineers (3) EN EGS
PR: EIN 4312C, EIN 4411. Design and modification of industrial production and material handling facilities. Basic analysis techniques, use of computer programs, automated warehousing.

EIN 4497 Facilities Design for Design Engineers (3) EN EGS
PR: EIN 4364, CAD/CIM, complete design of a plant facility. Course to use computers and software geared toward plant design and operation. A team of students is to be responsible for the complete project.

EIN 4411 Manufacturing Processes (3) EN EGS
PR: EGN 3365. The study of basic manufacturing processes and precision assembly. CAD/CAM including NC programming.

EIN 4601L Automation and Robotics (3) EN EGS
PR: EIN 4411. Introduction to the theories and concepts of automation as applied to material handling, inventory storage, material transfer, industrial processes and quality control.

EIN 4933 Special Topics in Industrial Engineering (1-4) EGB
Special topics related to economic analysis, optimization, human factors, manufacturing and automation aspect of industrial systems. Repeatably up to 5 credit hours.

EIN 5245 Work Physiology and Biomechanics (3) EN EGS
PR: CC, majors only. Human physiological limitations encountered in design, analysis and evaluation of man-machine systems.

EIN 5322 Principles of Engineering Management (3) EN EGS
Introduction to the fundamentals of planning, organizing and leadership as needed by engineers, scientists, and other professionals considering managerial positions.

EIN 5357 Engineering Value Analysis (3) EN EGS
PR: EIN 5219 or equiv., majors only. Statistical models for analyzing engineering alternatives from an economic viewpoint. The use of advanced engineering economy concepts in solving industrial problems.

EIV 4210 Program Management: Industrial-Technical Education (4) ED EDB
Planning, organizing, motivating and controlling of the learning environment in Industrial-Technical Education classroom and laboratories. Program standards for OSHA, program review, record keeping, and budgeting will be examined.

EIV 4360 Special Teaching Methods: Industrial-Technical Education (4) ED EDB
PR: EVT 4635 or CI.

EIV 4360 Special Teaching Methods: Industrial-Technical Education (4) ED EDB
Instructional techniques in industrial-technical education. Vocational Industrial Clubs of America activities may be included.

EIN 5315 Program Management: Diversified Cooperative Teaching (3) ED EDB
Organization, coordination, and budgeting of adult, cooperative, and special programs.

ELD 5111 Introduction to Specific Learning Disabilities (3) EDB
PR: EXE 4011 or DPR. Characteristics, needs and abilities of children with SLD. Emphasis is on theories, issues, trends, and philosophy of problems for such children.
ELD 4905 Independent Study: Specific Learning Disabilities (1-3) ED EDS
PR: DPR, S/U only. Specialized independent study determined by student’s needs and interests.

ELD 4909 Directed Study: Specific Learning Disabilities (1-3) ED EDS
PR: Senior standing. To extend competency in teaching field.

ELD 4941 Undergraduate Supervised Practicum in SLD (1-6) EDEDS
PR: ED 4011, S/U only. DPR. Supervised field experiences in assessment, behavior management and clinical teaching with classes for children who have specific learning disabilities.

ELR 3301L Laboratory 1 (1) EN EGE
PR: Lab 3573.

ELR 3302L Laboratory 2 (1) EN EGE
PR: ELR 3301L and EEL 3302. CR: EEL 4305.

ELR 4304L Laboratory 4 (1) EN EGE
PR: ELR 3301L CR: EEL 4411.

EMA 4324 Corrosion of Engineering Materials I (3) EN EGX
PR: EGN 3365L. Principles of electrochemical corrosion and the representation of corrosion processes by polarization diagrams. Origin and prevention of the localized forms of corrosion and approaches to corrosion control.

EMA 5325 Corrosion Control (3) EN EGX
Provide understanding of corrosion fundamentals. Introduce design for corrosion resistance, detection, protection, and control. Acquire research products.

EME 2040 Introduction to Computers in Education (3) ED EDP
Introduction to microcomputer technology and its function in the classroom to augment the teaching and learning processes. Topics include the use and evaluation of educational software, conceptualizing uses of computers in the classroom in terms of computer-directed instruction, computer-enhanced instruction, and computer-managed instruction; understanding hardware; using and applying commercial courseware, general applications software, word processors, database managers, etc., and disk operating systems.

EME 5403 Microcomputers in Education (3) ED EDP
A survey course designed to introduce practicing teachers to microcomputer technology and its function in the classroom to augment the teaching and learning processes. Objectives include the use and evaluation of educational software, classroom use of computers, instructional computing research, generic applications software (word processors, database managers, etc.), programming, disk operating systems, and microcomputer hardware.

EML 3041 Computational Methods (3) EN EGR
PR: EGN 2210, EGN 4450. Techniques to solve engineering problems using numerical methods and digital computers. Topics include roots of equations, simultaneous linear equations, numerical integration and differentiation, and curve fitting.

EML 3282 Kinematics and Dynamics of Machinery (3) EN EGR
PR: EGN 2282, EGN 3321. Kinematics of machines and mechanisms; position, velocity, and acceleration analysis of mechanisms; cams; gear trains; inertia forces in mechanisms; flywheels; balancing of rotating masses.

EML 3303 Mechanical Engineering Laboratory I (3) EN EGR

EML 3500 Machine Analysis and Design I (3) EN EGR
PR: EGN 3311, EGN 3365. Stress and deflection analysis of machine parts, variable loads, endurance limits, fasteners, bearings, power transmission, code consideration of pressure and vacuum vessels, elements of design.

EML 3701 Fluid Systems (3) EN EGR
PR: EGN 3343 Principles of fluid flow; piping and duct systems; fluid machinery; metering of compressible and incompressible flow; boundary layer theory; dimensional analysis; introduction to aerodynamics.

EML 4031 Visual Basic for Engineers and Scientists (3) EN EGR
PR: EGN 2210. Introduces students to the powerful graphical interface language of Visual Basic. Illustrates the use of the language in engineering and science applications.

EML 4325 Thermodynamics and Economics (3) EN EGR
PR: EGN 3343. Power and refrigeration cycles; fuels and combustion; internal combustion engine cycles; co-generation; nuclear energy; methods of economic analysis.

EML 4371 Materials I (3) EN EGR
PR: EML 3701, EML 3041. Conduction, convection and radiant heat transfer; thermal properties of materials; role of fluid flow in convective heat transfer; design and selection of heat exchangers.

EML 4380 Vibrations (3) EN EGR

EML 4302 Mechanical Engineering Laboratory II (3) EN EGR
PR: EML 3303, EML 4142C. Continuation of EML 3303 with emphasis on material and energy balances, stress analysis and vibrations. Lec.-lab. The Team-Project-Time Approach.

EML 4312 Mechanical Controls (3) EN EGR

EML 4414 Heat Power Engineering (3) EN EGR
PR: EML 4106C. The study of large, thermo-electric power conversion for utility systems. Combustion of hydrocarbon fuels, furnace, steam generator and auxiliary equipment design. Topics include control of air emissions, design and performance of combined cycle facilities.

EML 4415C Propulsion I (3) EN EGR
PR: EML 3701. EML 3500 or CI. Introduction to the design of propulsion systems. Basic analysis of internal combustion, jet and rocket engines. Application to ground and air transportation. Advanced propulsion concepts. Special topics for class discussion.

EML 4501 Machine Design (3) EN EGR
PR: EML 3500, EML 3262. Continuation of EML 3500. Antifriction bearings, journal bearings, power transmission, shafting.

EML 4551 Capstone Design MW (3) EN EGR
PR: EML 4501. Comprehensive design or feasibility project requiring application of previously acquired engineering knowledge; use of ANSYS and CAD.

EML 4552 Senior Mechanical Design (3) EN EGR
PR: EML 4551 or CC. Comprehensive design or feasibility study project. In some cases may be a continuation of EML 4551.

EML 4553 Introduction to Composite Materials (3) EN EGR
PR: EML 3500 and EGN 4450. The course introduces manufacturing types and applications of advanced composites. Students study micromechanical and macromechanical behavior of a laminate and analyze and design a laminate structure made of advanced composite materials.

EML 4554 Air Conditioning Design (3) EN EGR

EML 4555 Independent Study I (1-4) EN EGR
PR: CI. Specialized independent study determined by the student’s needs and interests.

EML 4930 Special Topics in Mechanical Engineering (1-4) EN EGR
PR: CC.

EML 5245 Tribology (3) EN EGR
PR: EML 4501 Introduction to friction, lubrication and wear. Contact of real surfaces, mechanics of friction, surface failures, boundary lubrication fluid properties, thin film lubrication, thick film lubrication, bearing and lubricant selection.

EML 5253 Mechanical Manufacturing Processes (3) EN EGR
PR: CI. Description of mechanical material cutting, forming and fabrication methods, as used in modern industrial manufacturing processes.

EML 5422 Internal Combustion Engines (3) EN EGR
PR: EML 4106C or EML 4450. Course is for the application of thermodynamics, chemistry, dynamics of machinery, electronics and fluid mechanics. Topics covered are: introduction of engines, fuels and combustion, numerical modeling, ignition, fuel systems, balance of reciprocating mechanisms and emission control of exhaust pollutants.

EML 5930 Special Topics III (1-4) EN EGR
PR: CC.

EML 5931 Special Topics IV (1-4) EN EGR
PR: CC.

EMR 4011 Introduction to Mental Retardation (3) ED EDS
PR: EEX 4011. DPR. Introduction to the classification, diagnosis, characteristics, and treatment of children with mental retardation.

EMR 5230 Educating the Severely/Profoundly Handicapped (3) ED EDS
PR: EMR 3011 or DPR. Emphasis on educational methods and
ENL 3273 British Literature 1900-1945 (3) AS ENG
Survey of poetry, drama, and fiction of such writers as Eliot, Yeats, Thomas, Conrad, Shaw, Joyce, Lawrence, Huxley, Woolf, Forster, Waugh, Owen, Auden, O’Casey, and others.

ENL 3323 Shakespeare from an Historio-Perspective HP (3) AS ENG
Examines the plays of Shakespeare from Romeo and Juliet to Othello as manifestations of the social, political, and intellectual forces of the time. Lectures will be available on audio tapes.

ENL 3331 Early Shakespeare (3) AS ENG
A study of from five to eight of Shakespeare's comedies, histories, and early tragedies, ending with Hamlet. Special attention to developing the student's ability to read and interpret the text.

ENL 3352 Late Shakespeare (3) AS ENG
A study of from five to eight of Shakespeare's problem plays, major tragedies, and late romances. Special attention to developing the student's ability to read and interpret the text.

ENL 4122 British Novel Through Hardy (3) AS ENG
A study of early and later British novels such as Fielding, Smollett, Sterne, Austen, Scott, Dickens, Eliot, and Hardy, among others.

ENL 4132 British Novel: Conrad to the Present (3) AS ENG
A critical study of British fiction from 1900 to the present, with emphasis on such writers as Conrad, Lawrence, Joyce, Woolf, Huxley, Orwell, Burgess, Murdoch, Golding, and others.

ENL 4171 History of British Drama to 1912 (3) AS ENG
A study of the history of British Drama from its liturgical origins to the present, with an emphasis on the work of Shakespeare. Included are the mystery and morality plays, and representative works by Marlowe, Jonson, Middleton, Dryden, Congreve, Sheridan, and Wilde, and others.

ENL 4303 Special Topics (3) AS ENG
The study of two or three major figures in British literature. The course may include such writers as Fielding and Austen, Keats and Yeats, Joyce and Woolf. Specific topics will vary. May be taken twice for credit with different topics.

ENL 4311 Chaucer (3) AS ENG
An intensive study of The Canterbury Tales and major critical concerns.

ENL 4312 Advanced Studies in Shakespeare (3) AS ENG
PR: ENL 3331 or ENL 3332, or CI. Intensive study of selected plays of Shakespeare, with special attention to significant critical issues and to the Elizabethan and Jacobean cultural setting.

ENL 4341 Milton (3) AS ENG
Study of the poetry and major prose of John Milton, with special emphasis on Paradise Lost.

ENS 1483 English for Foreign Students I (3) AS MLL
A special course for students learning English as a second language through intensive study of American English pronunciation and listening comprehension.

ENS 1484 English for Foreign Students II (3) AS MLL
PR: ENS 1483 or CI. A continuation of ENS 1483. Emphasis on reading and composition.

ENV 3001 Environmental Engineering (3) EN EQX
CR: ENG 3353. An introduction to various aspects of environmental problems faced by today's society. Topics covered are: air pollution, water pollution, noise pollution, solid waste management, ionizing radiation, pollution control, sludge and waste management, and chemical and biological treatment.

ENV 4004 Environmental Engineering Laboratory (1) EN EQX
PR: ENV 4000 Laboratory experience in the measuring of environmental parameters.

ENV 4101 Air Pollution Control (3) EN EQX
PR: ENG 3353. Behavior and effects of atmospheric contaminants and the principles of making measurements in the air environment. Basic concepts of meteorology and control technology are discussed. Regulatory aspects and air pollution standards are covered.

ENV 4351 Solid Waste Engineering (2) EN EQX
Introduction to the principles of integrated municipal solid waste management: waste source reduction, recycle and disposal options. Design of landfill disposal systems.

ENV 4400 Chemical Aspects of Environmental Engineering (3) EN EQX
PR: ENG 3353. For sophomore chemistry. Course is restricted to students pursuing the environmental engineering option in Civil Engineering and Chemical Engineering. Environmental quality and treatment parameters; sampling and sample preservation techniques; selected measurement techniques; interpretation and analysis of data; impact on water chemistry principles.

ENV 4417 Water Quality and Treatment (3) EN EQX
PR: ENG 3353. An introduction to municipal water supply and waste water treatment. Topics include water requirements and waste volumes, water quality, physical and chemical treatment processes, and advanced wastewater treatment processes.
ENV 4432 Water Systems Design (2) EN EGX
PR: EGN 3353. A design oriented course which utilizes the theory obtained in the Unit Operations course to design both industrial and domestic water treatment and water transport systems. It emphasizes the design procedures normally used in engineering practice.

ENV 4503 Environmental Unit Processes (3) EN EGX
PR: ENV 4400, EGN 3353. CR: ENV 3001. The theory and the design of unit operations normally used in the practice of environmental engineering, such as aggregation and mixing of liquids, filtration, leaching, gas absorption, sedimentation and clarification, drying, and evaporation.

ENV 5015 Capstone Environmental Design (WV) (3) EN EGX
PR: ENV 3001, ENV 4004, ENV 4417, ENV 4552. A capstone environmental design experience for seniors in Civil and Environmental Engineering. A design oriented course to design both industrial and domestic water treatment and wastewater and collection systems. The course emphasizes the design procedure normally used in engineering practice.

ENV 5105 Air Resource Management (3) EN EGX
PR: CI. Air pollution source impacts on ambient air quality, modeling, regulations, sources, strategic planning, and surveillance.

ENV 5345 Organic and Hazardous Waste Control (3) EN EGX
PR: CI Introduction to solid and hazardous waste management; regulatory concepts, waste types and quantities, and waste collection. EGN 2210 Use of microcomputer programs for computer-assisted design, landfills, design, incineration and heat recovery, contaminant generation and transport, and remedial action.

ENV 5514 Environmental Risk Analysis (3) EN EGX
PR: CI. Study of comprehensive application of risk analysis techniques for environmental control and protection purposes.

ENV 3004 Introduction to Entomology (3) AS BIO
PR: BSC 2010 and BSC 2011. An introduction to general aspects of insect morphology, development, and classification, with emphasis on local forms. Lec.-lab.

ENV 5505 Aquatic Entomology (3) AS BIO
PR: ENV 3004 or CI. Taxonomy, development, and ecology of aquatic insects with emphasis on local forms. Lec.-lab.

EPH 5051 Advanced Theories in Motor and Physical Disabilities (3) ED EDS
PR: EEX 4011 or DPR. Biological and functional aspects of motor and physical health disabilities, including dysfunction in central nervous system, covering motor, sensory, language and psychological disorders.

EPI 5321 Educational Strategies for Physically and Multihandicapped Students (3) ED EDS
PR: EPH 5051. Educational management of students with cerebral palsy, motor disabilities and multihandicapped conditions including rehabilitation and other community services.

ESI 4161C Computers in Industrial Engineering (3) EN EGB

ESI 4221 Industrial Statistics and Quality Control (3) EN EGB
PR: EGN 3443. Application of statistical techniques to the control of industrial processes. Control charts, acceptance sampling, design of experiments, analysis of variance and regression.

ESI 4244 Design Of Experiments (3) EN EGB
PR: EGN 3443. Application of factorial designs and control. Design and use of inventory control models, both designs applicable to engineering analyses. Analysis of variance and regression.

ESI 4312 Deterministic O. R. (3) EN EGB
PR: EGN 4450. An introduction to operations research techniques with particular emphasis on deterministic models. Linear programming, dynamic programming, goal programming, integer programming, and PERT/CPM networks are considered.

ESI 4313 Probabilistic O. R. (3) EN EGB

ESI 4523 Industrial Systems Simulation (3) EN EGB
PR: ESI 4313. A study of the development and analysis of computer simulation models: Monte Carlo, time-slice, and next-event, introduction to special purpose simulation languages.

ESI 4905 Independent Study (1-5) EN EGB
PR: CI. SU only. Specialized independent study determined by the student's needs and interests.

ESI 4911 Senior Project (3) EN EGB
PR: EIN 4364, CR: EIN 4353, ESI 4523. Analysis and design of systems in a directed project format. Individual or group work consisting of project proposal, project activities, and final report. Student projects are directed by faculty, with chairman's approval.

ESI 5236 Reliability Engineering (3) EN EGB

ESI 5506 Operations Research Engineering Management (3) EN EGS
Not open to students who have had ESI 4315. ESI 5219 or equiv., majors only Linear programming, non-linear programming, queuing, inventory, network analysis.

ESI 5470 Manufacturing Systems Analysis (3) EN EGS
PR: ESI 5421 or equiv., majors only Design of discrete and continuous simulation models. Model validation and verification. Statistical analysis of simulation model output.

ETG 4931 Special Topics in Technology I (1-5) EN ESB
PR: CC. No credit for Engineering Majors. ETG 4932 Special Topics in Technology II (1-5) EN ESB
PR: CC. No credit for Engineering Majors.

ETI 4566 Principles of Industrial Operations II (3) EN ESB
PR: CC. No credit for Engineering Majors. Application of techniques developed to the operation of an industrial firm through special projects.

EUH 2011 Ancient History I HP (3) AS HTY
An introductory survey of ancient history. EUH 2011 treats the ancient Near East and Greece from the origins of civilization to the full development of the Hellenistic kingdoms prior to conflict with Rome.

EUH 2012 Ancient History II HP (3) AS HTY
An introductory survey of ancient history. EUH 2012 deals with Rome through the Regal, Republican, and Imperial periods, from the beginnings of civilization in Italy to the division of the Roman Empire, A.D. 395.

EUH 2021 Medieval History I HP (3) AS HTY
A thematic survey of the Middle Ages. EUH 2021 deals with the nascent Christian civilization of Europe, circa 300-1050 A.D.

EUH 2022 Medieval History II HP (3) AS HTY
A thematic survey of the Middle Ages. EUH 2022 treats the period from the Renaissance to the French Revolution.

EUH 2031 Modern European History I HP (3) AS HTY
A thematic survey of Europe in the modern age. EUH 2031 treats the period from the Renaissance to the French Revolution.

EUH 2032 Modern European History II HP (3) AS HTY
A thematic survey of Europe in the modern age. EUH 2032, from the French Revolution to the present.

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

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

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

EUH 3188 Medieval Society (4) AS HTY
A survey of the daily life and attitudes of the medieval nobleman, peasant, townsman, and the agrarian-urban economy and society which affected their lives.

EUH 3189 Medieval Politics (4) AS HTY
An inquiry into the nature, distribution, and use of power during the Middle Ages, in such institutions as feudalism, monarchy, cities, and the church.
EVR 3202 History of 17th and 18th Century Europe (4) AS HTY
A history of Europe from the beginning of the Thirty Years' War to the outbreak of the French Revolution. Political and intellectual developments will be assessed in the light of society and the economy.

EVR 3205 History of Nineteenth Century Europe (4) AS HTY
A comparative study of economic, political, social, and intellectual developments in nineteenth century Europe.

EVR 3206 History of Twentieth Century Europe (4) AS HTY
A comparative study of economic, political, social, and intellectual developments in twentieth century Europe.

EVR 3401 Classical Greece (4) AS HTY
A study of ancient Greece focusing on the brilliant period following the Persian Wars, but embracing also the formative Bronze, Middle and Archaic ages, and the decline culminating in the conquest of Greece by Philip II of Macedon in 338 B.C.

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

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

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

EVR 3461 German History to 1870 (4) AS HTY
A political, social, and cultural approach to the history of the Germanys from 1500 through 1870, with emphasis on the Protestant Reformation, the rise of Brandenburg-Prussian, and the unification under Bismarck.

EVR 3462 German History 1870 to the Present (4) AS HTY
A political, social, and cultural approach to the history of the German Empire from 1870 through the 1970's. The nation's two attempts to try for world power status are highlighted, as well as the Weimar Republic, prototype of the embattled democracy.

EVR 3501 British History to 1688 (4) AS HTY
A study of major developments in British history from the 15th century to 1688.

EVR 3502 British History 1688 to Present (4) AS HTY
A study of the major themes of British history since the Glorious Revolution, including social, political, and economic developments in the formation of the modern democratic welfare state.

EVR 3574 History of Imperial Russia, 1689-1917 (4) AS HTY
A survey of social, political, economic, and cultural development in the Russian Empire from Peter the Great to Nicholas II. Topics include the modernization of the Empire, the culture of the Imperial court, peasant rebellions, social and legal reforms, the role of the West, and the collapse of the Romanov dynasty.

EVR 3576 History of the Soviet Union, 1917-1991 (4) AS HTY
A study of Soviet society under communism from the Revolution to the collapse of the USSR. Topics include the origins and development of revolutionary socialism, the Bolshevik seizure of power, Stalinism and the Great Terror, popular dissent and resistance, the treatment and experience of ethnic minorities, Gorbachev and the dissolution of the Soviet Union.

EVS 3000 Europe SS (3) AS INT
Area study courses are multi-disciplinary in nature and deal with one or more countries of a region. Each course combines some measure of political, economic, historical, religious, geographic, anthropological, and sociological analysis in dealing with salient features and current problems.

EVS 3022 Russian RS HP AF (3) AS INT
Area study courses are multi-disciplinary in nature and deal with one or more countries of a region. Each course combines some measure of political, economic, historical, religious, geographic, anthropological, and sociological analysis in dealing with salient features and current problems.

EVR 2001 Introduction to Environmental Science (3) AS ESP
CR: EVR 2001L. An introductory lecture course linking the human and physical/biological world. The course will develop an understanding of population and resource interactions and complement the lecture course. Field trips.

EVR 2001L Environmental Science Lab (1) AS ESP
CR: EVR 2001. A laboratory course linking the human and physical/biological world. The lab will develop an understanding of population and resource interactions and complement the lecture course. Field trips.

EVR 2861 Introduction to Environmental Policy (3) AS ESP
An introduction to environmental policy using class lectures, student projects, and independent readings. Emphasis will be placed on understanding basic policy mechanisms and major policy actions relating to environmental issues at the local, national and international level.

EVR 4027 Wetland Environments MW (3) AS ESP
PR: PCB 3043 or CI. Study of the general properties and ecology of wetlands, examination of the distribution and functions of wetlands, and the formulation of wetland conservation uses and policies.

EVR 4900 Directed Readings (1-6) AS ESP
To provide advanced students with interdisciplinary research experience in areas of specific interest.

EVR 4905 Independent Study (1-6) AS ESP
To provide advanced students with the opportunity for independent study in areas of specific interest.

EVR 4910 Environmental Science and Policy Project (3) AS ESP
Open to senior majors only. S/U only. Environmental science project consisting of research in a field related to environmental science/environmental policy. Supervised by a faculty member.

EVR 4921 Environmental Science and Policy Seminar (1) AS ESP
Restricted to senior majors. S/U only. A topical reading and discussion seminar focusing on the interdisciplinary nature of environmental science and environmental policy.

EVT 4330 Selected Topics in Environmental Science and Policy
Each topic is a course under the direction of a faculty member with the content depending on the interests of the students and faculty involved. All areas of Environmental Science, Policy, Ethics and Law may be studied.

EVR 4940 Environmental Science Internship (3) AS ESP
Open to senior majors only. S/U only. The purpose of this course is to promote the student's understanding and application of environmental science and policy within a practical organizational context. An internship contract and report required.

EVT 4065 History and Principles of Vocational Education (4) ED EDV
An overview of current policies and principles in vocational education, including their historical, sociological, and philosophical bases. Open to majors and non-majors.

EVT 4084C Professional Development in Industrial Technical Education (1-3) ED EDV
Designed for the ITE teacher in formulating plans of professional development. Competencies include the development of a personal education philosophy; attributes in creating harmonious school community relationships; and desirable staff and teacher associations.

EVT 4165 Curriculum Construction: Industrial-Technical Education (4) ED EDV
Design, development, implementation and evaluation of effective occupational materials in industrial, technical and health related occupations; includes individualized and self-paced materials. Open to majors and non-majors.

EVT 4263 Organization And Administration Of Student Workshops (3) ED EDV
Includes the organization and administration of the local student vocational organization in industrial, health occupations, business and distributive education.

EVT 4365 Basic Teaching Methods in Vocational Education (4) ED EDV
Examines the role of the vocational instructor in the teaching learning process; looks at factors that promote and inhibit learning. Reviews a wide variety of instructional approaches, techniques and methods. Includes selected teaching techniques for situations.

EVT 4367 Assessing Student Skill in Industrial Technical Education (4) ED EDV
Techniques for assessing student's mastery of skills in industrial/technical education. Focuses on specific competencies including developing and administering performance tests, monitoring student process, and others. Open to majors and non-majors.

EVT 4562 Vocational Education for Special Needs Students (4) ED EDV
Focuses on modifying the vocational education curriculum, laboratory, shop, student outcomes, learning activities, tests, media, etc. to accommodate the unique learning needs of minority, handicapped, disadvantaged, non-traditional and other special needs students.

EVT 4851 Equity in Schools and the Workplace (3) ED EDV
Issues related to gender equity in schools and the workplace. Includes legal, ethical, psychological, sociological, and economic
Diese Seite enthält keine textlichen Inhalte.
FLE 4334 Foreign Language Teaching in the Elementary School (3) ED EX
PR: FLE 4314 and concurrent registration. Fluency in target language and in English. Methods of planning and teaching foreign languages in the elementary school. The emphasis is on teaching communicatively and on integrating culture in the K-6 classroom.

FLE 4314 Teaching students with Limited English Proficiency (3) ED EX
This course is designed to prepare preprofessional teachers to provide linguistically and culturally appropriate instruction, assessment, and learning opportunities for students with Limited English Proficiency.

FLE 4333 Foreign Language Teaching in the Secondary School (3) ED EX
PR: FLE 4314, fluency in the target language and in English or DPR. Required concurrently with FLE 4314 or FLE 4333. Fluency in the target language and in English. Pre-internship field experience in a K-12 environment. Will include observation and practice in a K-12 classroom and class meetings.

FLE 4936 Senior Seminar in Foreign Language Education (2) ED EX
PR: Senior standing. Required concurrently with internship. Synthesizes all aspects of the senior candidate's courses in complete college program.

FLE 4940 Internship: Foreign Language Education (1-12) ED EX
Interns take Senior Seminar in Education concurrently. S/U only. One full semester of internship in a public or private school.

FOL 3100 General Foreign Language I (1-4) AS MLL
A general purpose course that may be used for transfer of credit, credit by examination, and similar matters; may also be used for formal courses in less commonly taught languages or in professional translation.

FOL 4101 General Foreign Language II (1-3) AS MLL
A general purpose course that may be used for transfer of credit, credit by examination, and similar matters; may also be used for formal courses in less commonly taught languages or for workshops in professional interpreting.

FOL 4905 Directed Study (1-3) AS MLL
Departmental approval required.

FOL 5006 Directed Study (1-3) AS MLL
PR: FOL 4101 or equivalent. Design to provide a reading ability in French that will support research in other disciplines. Primarily for graduate students.

FRE 1120 Beginning French I (4) AS MLL
CR: FRE 1120L. The first course in the study of elementary French. Emphasis on the development of basic skills in comprehension, speaking, reading, and writing.

FRE 1120L Beginning French I Laboratory (1) AS MLL
CR: FRE 1120. Concurrent enrollment with a lecture session is required, and, if dropped, then dropped simultaneously. S/U only. A laboratory designed to offer additional practice using various instructional technologies and media.

FRE 1121 Beginning French II (4) AS MLL
PR: FRE 1120 or equivalent. CR: FRE 1121L. A continuation of FRE 1120.

FRE 1121L Beginning French II Laboratory (1) AS MLL
CR: FRE 1121. Concurrent enrollment with a lecture session is required, and, if dropped, then dropped simultaneously. S/U only. A laboratory designed to offer additional practice using various instructional technologies and media.

FRE 1170 Overseas Study-Elem. French (4) AS MLL
Departmental approval required. Elementary-level French taught in France. In lieu of FRE 1120 and FRE 1121.

FRE 2200 French III (3) AS MLL
PR: FRE 1121 or equivalent. A review of the basic structure of French and its culture.

FRE 2201 French IV (3) AS MLL
PR: FRE 2200 or equivalent. Readings in French on the intermediate level.

FRE 2240 Conversation I (3) AS MLL
PR: FRE 2241 or equivalent proficiency. Conversation practice with concentration on current idiomatic usage.

FRE 2270 Overseas Study-Intro. French (1-4) AS MLL
PR: Two semesters of university-level French or equivalent proficiency. Departmental approval required.

FRE 3230 Reading in French Literature and Culture (3) AS MLL
PR: FRE 2201 or equivalent. This course is designed to build reading skills in French while giving students a broad background in French culture.

FRE 4430 Composition I (3) AS MLL
PR: FRE 2200 and/or FRE 2201. A fundamental composition course for students who have completed FRE 2200 and/or 2201.

FRE 3440 French For Business (3) AS MLL
PR: FLE 2200 or equivalent. An introduction to the French language in ordinary business transactions.

FRE 3470 Overseas Study (1-6) AS MLL
Departmental approval required. An intensive study-travel project in France.

FRE 3500 French Civilization (3) AS MLL
Readings and discussion on the cultural history of France.

FRE 4421 Composition II (3) AS MLL
Continuation of French composition. This course is designed to follow FRE 3420.

FRE 4471 Advanced Overseas Study (1-6) AS MLL
PR: FRE 3470 or Cl. Departmental approval required. Intensive language study in France.

FRE 4700 French Linguistics (3) AS MLL
PR: LIN 3010 and FRE 2201 or equivalent. An introduction to the phonological, morphological, and syntactic structure of French.

FRE 4805 Directed Study (1-3) AS MLL
Departmental approval required.

FRE 4930 Selected Topics (1-3) AS MLL
Study of an author, movement, or theme.

FRE 5342 Advanced Written Expression (3) AS MLL
PR: FRE 4430 or equivalent. Course is designed for students who have completed FRE 4430 or equivalent. An introduction to French compositions.

FRE 5566 Contemporary France (3) AS MLL
PR: FRE 3500 or equivalent or graduate standing. An advanced course in contemporary French civilization and culture including a survey of recent political, social, artistic, and political trends as well as various current intellectual movements. Text and discussions in French.

FRT 3001 Great French Love Stories in Translation MW (3) AS
An overview of the evolution of the concept of romantic and passionate love in French literature throughout the centuries and its impact on western literature and thought.

FRT 3140 French Literary Masterpieces in English Translation 6A LW (3) AS MLL
A survey of the major literary works of France, tracing not only literary but intellectual and cultural history from the Middle Ages to the present.

FRW 4100 The French Novel 6A MW LW (3) AS MLL
PR: FRE 3230, FRE 3420 or CI. Study of the most representative novels from the 17th - 20th centuries in France, examining literary movements, ideas, and techniques.

FRW 4101 Introduction to French Drama and Poetry 6A MW (3) AS MLL
PR: FRE 3230. A study of the history of drama and poetry. Will include medieval drama, Racine, Corneille, Molière, Anouilh, Sartre, Ionesco and others. Will also include Maeterlinck, Hugo, Vigny, Musset, Baudelaire, Mallarme, Rimbaud, Valery, Pepus, Eliard, Apollinaire, Har, and others. Course content may vary from year to year.

FRW 5222 Classical Prose and Poetry (3) AS MLL
PR: FRW 4101 Emphasis on Malherbe, Descartes, Pascal, La Fontaine, and Boileau.

FRW 5226 20th Century Poetry and Theatre (3) AS MLL
PR: FRW 4101 Valery, Claudel, Anouilh, Motherland, Sartre, Ionesco.
FRW 5286 The 20th Century Novel (3) AS MLL
PR: FRW 4100. Proust, Gide, Mauriac, Malraux, Camus, Robbe-
Grillet.
FRW 5314 Classical Drama (3) AS MLL
PR: FRW 4101 Cornelle, Moliere, and Racine.
FRW 5415 Literature of the Middle Ages (3) AS MLL
PR: FRW 4100 or FRW 4101. Major genres, including epics, Arthurian
romances, drama and lyric poetry. Reading in modern French
translation.
FRW 5425 Literature of the Renaissance (3) AS MLL
PR: FRW 4100 or FRW 4101. A study of Renaissance French
literature, with emphasis on Boccaccio, Montaigne, and the Pléiade poets.
FRW 5445 18th Century Literature (3) AS MLL
PR: FRW 4100. The classical tradition and the new currents of
thought in the Age of Enlightenment.
FRW 5528 Pre-Romanticism and Early Realism (3) AS MLL
PR: FRW 4100 or FRW 4101. The precursors of romanticism.
Emphasis on Rousseau, Bernardin de St. Pierre, Chenier, and
Chateaubriand.
FRW 5535 Romanticism and Realism (3) AS MLL
PR: FRW 4101 A study of the romantic and early realistic movements
with emphasis on Lamartine, Vigny, Musset, Hugo, and Balzac.
FRW 5556 Naturalism and Realism (3) AS MLL
PR: FRW 4100 or FRW 4101 A detailed study of realism and
naturalism, focusing on Flaubert, Zola, les Goncourt, Maupassant, and
Daudet.
FRW 5934 Selected Topics (1-3) AS MLL
PR: Upper-level or graduate standing. Study of an author, movement
or period.

GEA 2000 Global Geography SS HP AF (4) AS GPY
Comparative and analytical analysis of representative regions of the
world with emphasis on cultural, political, economic, environmental,
and physical diversity.

GEA 3194 Regional Geography (4) AS GPY
Variable title course to systematically study and compare special
regions identified by the instructor.

GEA 3300 Geography of Middle America (4) AS GPY
GEA 3405 Geography of Latin America 6A (4) AS GPY
GEA 3500 Geography of Europe 6A (4) AS GPY
GEA 3554 Geography of the USSR (4) AS GPY
GEA 3600 Geography of Africa (4) AS GPY
GEA 3703 Geography of Asia (4) AS GPY
GEA 2350 Doing Business Around the World SS (3) BA GBA

This course introduces the student to: 1) the nature of international
business; 2) the framework of international organizations and the
monetary system within which international business functions; 3) the
forces affecting international business, and 4) management
responses to problems caused by international environments.

GEA 2935 Selected Topics in Business (1-6) BA GBA
Topics to be selected by department chairperson.

GEA 4890 Business Policy MW (3) BA GBA
PR: Senior standing and FIN 3403, MAN 3025, MMR 3025. The
course is intended to provide a unifying, integrating, and coordinating
overview of the major business functions in order to the better conceptualization
and analysis of the business problems, and skills learned
separately in other, more specialized courses in Business Administra-
tion.

GEA 4910 Independent Study (1-3) BA GBA
PR: CI, SU only. Specialized independent study determined by the
student’s needs and interests.

GEA 4915 Independent Research (1-4) BA GBA
PR: CI. Individual study contract with instructor and department
chairperson required. The research project will be mutually deter-
mined by the student and instructor.

GEA 4935 Selected Topics in Business Administration (1-4)
BA GBA

The content and organization of this course will vary according to
the current interests of the faculty and needs of students.

GEO 1930 Geography of Current Events SS (4) AS GPY
Application of basic geographic principles of the analysis of
contemporary events in various parts of the world.

GEO 2041C Map Interpretation (4) AS GPY
Analysis and synthesis of various types of maps and map projec-
tions.

GEO 2271 Introduction to Earth Systems Science NS (3) AS GPY
For non-majors only. The application of basic earth system science
analysis to environmental problems. Review of impact of human
activities on the surface of the earth at local and global scales.

GEO 3013L Introduction to Physical Geography Lab (1) AS GPY
Laboratory portion of introduction to physical geography (GEO 3013).

GEO 3164C Quantitative Methods (4) AS GPY
PR: 12 credit hours in Geography or CI. Statistical analysis in
graphic research.

GEO 3180 Digital Thematic Mapping (4) AS GPY
An introduction to the concepts underlying modern, computer-
ased mapping and to the collection and storage of digital spatial
data.

GEO 3190 Human Geography (4) AS GPY
Systematic treatment of human activities on earth; population,
settlement, agriculture, industry, trade, transportation, and political
aspects are among those considered.

GEO 3602 Urban Geography (4) AS GPY
PR: GEO 3402 or CI. Spatial analysis of urban areas: growth,
location, spacing, and size. Development, site, situation, internal
structure, and hinterland are considered.

GEO 4114C Geographic Techniques and Methodology (4) AS GPY
PR: 12 credit hours in Geography or CI. Selected topics in geographic
methodologies and their application.

GEO 4131C Remote Sensing of the Environment (4) AS GPY
PR: GEO 3140C and GEO 3164C or CI. Analysis of satellite images
and aerial photographs for studies of the environment.

GEO 4151C Geographic Information Systems (4) AS GPY
PR: GEO 3140C and GEO 3164C, or CI.

GEO 4201C Advanced Physical Geography (4) AS GPY
GEO 3013 or CI. Intensive study of a topic selected from physical
geography.

GEO 4210 Process Geomorphology (4) AS GPY
PR: GEO 3013 or GEO 3164C. An advanced study of the processes
by which landscapes are formed.

GEO 4270 Geographic Analysis of Urban Areas (4) AS GPY
The geographic factors underlying urban growth, population
movement, and urban transportation problems

GEO 4520 Political Geography (4) AS GPY
PR: GEO 3013 or CI. The relationships of culture and nature, from
ancient times to the present. The distribution of species at an intermediate to large spacial scale.

GEO 4340 Natural Hazards (4) AS GPY
PR: GEO 3164 or CI. Examination of the physical, social, economic,
political and cultural forces that create the phenomena of natural
hazards. Case studies from around the world will include floods,
droughts, tornadoes, hurricanes, freezes, heat waves, wild fires, earthquakes, tsunami, and volcanoes.

GEO 4372 Global Conservation (4) AS GPY
The distribution, exploitation, and conservation of physical and human
resources, ecology.

GEO 4421 Cultural Geography (4) AS GPY
PR: GEO 3402 or CI. The interrelationships of culture and nature, from
ancient times to the present. The distribution of species at an intermediate to large spacial scale.

GEO 4450 Economic Geography (4) AS GPY
PR: GEO 3013 or CI. The spatial organization of economic production,
consumption, and exchange systems.

GEO 4504 Advanced Urban Geography MW (4) AS GPY
PR: GEO 3402, GEO 3602, or CI. Intensive examination of issues
such as economic restructuring and inner-city decline, ghetto
formation, gentrification, transportation, and policy-making.

GEO 4507 Transportation and Geography (4) AS GPY
PR: GEO 3402 and GEO 3164 or CI. General concepts related to the
movement of goods and people, with particular emphasis on spatial
principles and urban transportation problems and planning.

GEO 4900 Directed Reading (1-4) AS GPY
PR: 20 hours in geography and CI prior to registration.

GEO 4910 Individual Research (1-4) AS GPY
PR: 20 hours in geography and CI prior to registration.

GEO 5134C Advanced Remote Sensing (3) AS GPY
PR: GS in Geography or CI, GEO 4124C. Study of digital image
processing techniques. Topics include filtering techniques, geometric
and radiometric normalization, and classification algorithms with
emphasis on developing.

GEO 5157 Advanced Geographic Information Systems (3) AS GPY
PR: GS in Geography or CI. Spatial problem solving utilizing GIS
mapping and statistical methods. The course is designed to give
students hands-on experience in using computerized techniques.
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for geographic analysis,
GEO 5177 GIS for Non-Majors (3) AS GPY
An introduction to the concepts underlying digital thematic mapping and geographical information systems (GIS) for non-geography majors and non-geography graduate students.
GEO 5215 Advances in Geomorphology (3) AS GPY
PR: GEO 4272 or CI. Examination of how earth systems influence soil formation, weathering, erosion, and deposition. Details analysis of soils, climosequences, biosequences, tephrosequences, lithosequences, chronosequences, and anthrosequences.
GEO 5263 Advances in Soils (3) AS GPY
PR: GEO 4372 or CI. A systematic approach to hydrology using the drainage basin as the fundamental unit of analysis is used to explore form and process, while modeling streamflows.
GEO 5347 Advances in Natural Hazards (3) AS GPY
PR: GEO 4372 or CI. Analysis of natural hazards integrating principles of physical, social, economic, and technical forces that affect extreme geophysical events.
GEO 5475 Advanced Political Geography (3) AS GPY
PR: GEO 4470 or CI. Advanced investigation of geopolitical issues including: the human construction of territory, ethnic relations, the making of nations and states, the geopolitics of localities, and environmental policy making.
GEO 5545 Advanced Economic Geography (3) AS GPY
PR: GEO 4500 or CI. An intensive examination of selected issues in economic geography including: regional development and decline; spatial labor market trends; business locational analysis; and comparative economic policy.
GEO 5605 Contemporary Urban Issues (3) AS GPY
PR: GEO 3602; GEO 4604; or CI. Advanced survey of urban issues such as: industrial restructuring and urban development, inner-city ethnic relations, the geopolitics of urban governance, and urban culture.
GEO 5704 Advanced Transportation Geography (3) AS GPY
PR: GEO 4114; GEO 4700; or CI. Review of transportation issues and analysis, focusing on modeling and planning for flows of goods and people. Provides a hands-on approach to use of GIS for such analysis.
GER 1120 Beginning German I (4) AS MLL
CR: GER 1120L. Development of basic skills in listening and reading comprehension, speaking and writing of German.
GER 1120L Beginning German I Laboratory (1) AS MLL
CR: GER 1120. Concurrent enrollment with a lecture session is required, and, if dropped, then dropped simultaneously. S/U only. A laboratory designed to offer additional practice using various instructional technologies and media.
GER 1121 Beginning German II (4) AS MLL
PR: GER 1120 or equivalent. CR: GER 1121L. Continued development of basic skills in listening and reading comprehension, speaking and writing of German.
GER 1121L Beginning German II Laboratory (1) AS MLL
CR: GER 1121. Concurrent enrollment with a lecture session is required, and, if dropped, then dropped simultaneously. S/U only. A laboratory designed to offer additional practice using various instructional technologies and media.
GER 2200 German III (3) AS MLL
PR: GER 1121 or equivalent. A review of the basic structure of spoken and written German. May be taken concurrently with GER 2201.
GER 2201 German IV (3) AS MLL
PR: GER 1121 or equivalent. Readings in German on the intermediate level. May be taken concurrently with GER 2200.
GER 3420 Composition I (3) AS MLL
A fundamental course for students who have completed GER 2200 or GER 2201.
GER 3500 German Civilization (3) AS MLL
PR: GER 2200 or GER 2201. Readings in German on the cultural history of Germany.
GER 4410 Composition II (3) AS MLL
Free conversation based on the current German idiom.
GER 4421 Composition II (3) AS MLL
Practical training in modern German usage and differences of style.
GER 3100 German Literature in English Translation MW (3) AS MLL
Analysis and interpretation of selected major works of German literature, to be read in English, with regard to their thought content and relevance to out thoughts and actions.
GEW 4100 Survey of German Literature I (4) AS MLL
Old High German and Middle High German literature in modern German translation; the literature of Humanism and Baroque, the classical period.
GEW 4101 Survey of German Literature II (4) AS MLL
The romantic period, 19th and 20th centuries.
GEW 4900 Directed Study of Geographical processes and landforms with an emphasis on Florida.
GEW 4930 Selected Topics (1-3) AS MLL
Study of an author, movement or theme.
GEW 5475 20th Century Literature to 1945 (3) AS MLL
A study of major styles in German literature from 1900 to WW II with emphasis on Hauptmann, Schnitzler, Hofmannsthal, George Rilke, Kaiser, Heym, Trakl, Thomas Mann, Hesse, Kafka, Benn, Brecht.
GEW 5489 20th Century Literature: 1945 to Present (3) AS MLL
Study of major trends in German literature since WW II with emphasis on Borchert, Frisch, Durrenmatt, Boll, Uwe, Johnson, Grass, Aichinger, Eich Enzensberger, Bachmann.
GER 5105 The Enlargement (3) AS MLL
Selected dramas and critical writings by Lessing, Wieland, Kant.
GER 5545 Romanticism (3) AS MLL
Jenaer circle and Heidelberg circle, the late romantic period, the writers between Classicism and Romanticism.
GER 5555 Realism (3) AS MLL
Selected works by Grillparzer, Grabbe, Buchner, Hebbel, Heine, Immerman, Stifter, Keller, Meyer, Storm, Raabe, Hulhoff, and Monike.
GER 5934 Selected Topics (1-3) AS MLL
PR: Upper-level or graduate standing. Study of an author, movement or theme.
GEY 2200 Introduction to Gerontology SS (3) AS GEY
This course is designed to be an introduction to the study of aging. The aging process is viewed from a multi-disciplinary perspective including the biological, psychological, and sociological aspects of old age.
GEY 3323 Community Services for Older Adults (3) AS GEY
This class is designed to examine organizations that provide community services to older adults and professionals, including innovative programs. Students will learn how to provide referrals to existing services as well as ways to develop new programs to address unmet needs of the elderly.
GEY 3601 Physical Changes and Aging (3) AS GEY
A survey of normal and pathological physical changes occurring from middle age through older age. Course emphasis will be on basic age-related changes and their implications for behavior in older age.
GEY 3625 Sociocultural Aspects of Aging (3) AS GEY
Consideration of human aging in a broad sociocultural context. Course emphasis will be on historical, philosophic, and demographic aspects of aging, theories of social gerontology, attitudes toward aging and the aged, cross-cultural perspectives on aging, the sociology of retirement and the aging family.
GEY 4322 Gerontological Case Management (3) AS GEY
This course examines the role and function of case management in meeting the care needs of the older adult. All aspects of case management practice are covered, including the elements of the case management process as well as ethical and legal issues.
GEY 4327 Long-Term Care Administration I (3) AS GEY
PR: GEY 3000 A survey of Long Term Care (LTC) environments. Explored are such issues as definitions of LTC, physiological conditions of LTC, the institutional setting, the sociopolitical context, and methods of evaluation and intervention.
GEY 4328 Long-Term Care Administration II (3) AS GEY
PR: GEY 4327. AGC 2011, each with a grade of C or better. Administration of long-term care institutions from a group dynamics perspective. Emphasis on informed problem solving and decision-making via analysis of the psychosocial and sociocultural environment in the nursing home community. Course objective is to create efficient and humane living and working conditions in nursing homes.
GEY 4329 Long-Term Care Administration III (3) AS GEY
PR: GEY 4328, AGC 2011, each with a grade of C or better. This course will familiarize the student with the basic aspects of nursing home administration through the practical application of management theory and concepts.
GEY 4340 Housing for the Elderly (3) AS GEY
Major issues and aspects of conventional and planned housing for elderly. Several field trips will be taken.
GEY 4360 Gerontological Counseling (3) AS GEY
An introduction to the study of the major mental health problems of the elderly. Current approaches to counseling the elderly in community and institutional settings are discussed.
GEY 4401 Research Methods in Gerontology (3) AS GEY
PR: STA 2122 or equivalent with a grade of C or better. Restricted to Gerontology majors, others by departmental permission. Methods and techniques of social research in gerontology. Design of gerontological studies, collection and analysis of data, interpretation of results, and preparation of reports.

GEY 4612 Psychology of Aging (3) AS GEY
A comprehensive overview of psychological aspects of aging. Topics will include age-related changes in sensation/perception, cognition, and personality, as well as application to late-life psycho-pathology.

GEY 4635 Business Management in an Aging Society (3) AS GEY
This course provides interested students with an interdisciplinary perspective that addresses both business management and the impact of our aging society on business.

GEY 4641 Death and Dying (3) AS GEY
A broad overview of the basic concepts and psychosocial issues relating to the meaning of loss and death, the process of death, and the experience of grieving. Health care practices are considered along with community resources.

GEY 4647 Ethical and Legal Issues in Aging (3) AS GEY
A consideration of major ethical and legal issues in aging and their implications for policies, priorities and services.

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

GEY 4935 Special Topics in Gerontology (3) AS GEY
Courses on topics such as retirement, mental health, human services organization, nursing home administration, the older woman, and ethnic aging.

GEY 4945 Field Placement (1-9) AS GEY
PR: CI. Subject to availability of internship sites approved by the Department of Gerontology. Internship in an agency or community setting. A full-time assignment to an agency or organization engaged in planning or administering programs for older people in the BA program (6 hours), or to a nursing home if in the BS program (8 hours).

GEY 5620 Sociological Aspects Of Aging (3) AS GEY
Examines, within a sociological frame of reference, the interrelationships between the aged (or aging) and the structure and function of the social system and its major institutionalized subsystems.

GEY 5630 Economics and Aging (3) AS GEY
Examines basic economic systems as they impact the aged. Emphasis is on applied aspects of economic planning, pensions, insurance, social security and other support systems.

GEY 5642 Perspectives on Death and Dying (3) AS GEY
Study of the various bio-physiological, medical, legal, and religious problems caused by dying and death, and how individuals and groups have responded in the past and present.

GLY 2010 Dynamic Earth: Introduction to Physical Geology (3) AS GLY
May substitute for Geology majors; open to non-majors. Study of minerals, rocks, and dynamic processes of the earth. Introduction to the origin of earth’s materials, landforms, and structures.

GLY 2010L Dynamic Earth Laboratory (1) AS GLY
PR: GLY 2010 or concurrent registration. Required for Geology majors; open to non-majors. Laboratory study of earth materials, landforms, geologic structures, topographic and geologic maps. Lec-lab-field trips.

GLY 2030 Environmental Geology NS (3) AS GLY
May substitute for 2010 for geology majors. A first course in geology emphasizing environmental aspects of the earth’s crust, such as earthquakes, deposition of the earth’s resources, water-supply problems, and geologic aspects of land use and planning.

GLY 2030L Environmental Geology Laboratory (1) NS (3) AS GLY
No credit for students who have taken GLY 2010 or GLY 2030. This course examines the geology of the earth and the environment, using an earth systems approach that looks at interactions between the lithosphere, hydrosphere, atmosphere, and biosphere. Student will learn general principles of geology, travel world-wide on the internet, and participate in discussions on topics ranging from the scientific method to the latest geologic discoveries.

GLY 2050 Origins: From the Big Bang to the Ice Age NS (3) AS GLY
The history of the cosmos, origin of the universe, galaxies, the solar system, and earth, evolution of life, great extinctions including the dinosaurs, evolution of the primates, and the environmental future of the planet. (Open to non-majors.)

GLY 2050 Science, Earth and Life NS (3) AS GLY
PRI: A course in geology. Required for Geology majors; open to non-majors. Study of the physical and biological history of the earth including evolution of the major groups of organisms, plate tectonics, and interpretation of ancient environments.

GLY 2100L Earth History Laboratory (1) AS GLY
Laboratory study of the history of the earth and life. Required for Geology majors; open to non-majors.

GLY 2930 Selected Topics in Geology (1-3) AS GLY
Does not count toward the geology major. Topical courses in geology of general interest.

GLY 3205 Mineralogy (4) AS GLY
PR: GLY 2010, one year of chemistry, or CI, Principles of crystal chemistry, crystallography and mineralogy with emphasis on common rock-forming minerals. Lec-lab.

GLY 3400C Structural Geology (4) AS GLY
PR: 12 hours of geology, MAC 2147 or equivalent or CI. Study of the origin and development of structural features of the earth’s crust. Applications of principles of geology, physics, and mathematics to understanding relationships of strata and interpreting structural features. Study of regional tectonics and major structural provinces. Lec-lab.

GLY 3554C The Earth's Surface (4) AS GLY
PR: Four (4) hours of Geology courses, including GLY 2015L, BSC 2010, PHY 2053. Not available on S/U basis for geology majors; may be taken S/U by other majors. Principles of weathering, erosion, production and transport of sediment on the earth’s surface and the resulting geomorphology. Modern sedimentary environments and the process-response systems that govern them.

GLY 3610C Introduction to Invertebrate Paleontology (4) AS GLY
PR: GL Y 2100. BSC 2010 or equivalent strongly encouraged as background. Lectures cover principles and applications of paleontology including biostratigraphy, taphonomy, and micro- and macroevolutionary patterns and processes. Labs survey the invertebrate phyla comprising the bulk of the fossil record.

GLY 3800 The Fluid Earth (4) AS GLY
PR: Four (4) hours of Geology courses, including GLY 2015L; MAC 2311 and MAC 2312 or equivalent; PHY 2048 and PHY 2048L. Not available as S/U for geology majors; S/U available for others. Physical, chemical and biological processes affecting fluids of the lithosphere, oceans and atmosphere. Water as a geologic medium and global entity. A systems approach.

GLY 3850 Geology For Engineers (3) AS GLY
PR: Junior standing in College of Engineering or CI. No credit toward the geology major, or for those with credit for GLY 2010. An examination of geological materials and processes designed for engineering students; classification and properties of earth materials, surface processes, site investigation techniques, applications of geology to the solution of engineering problems.

GLY 4045 Moons, Planets, and Meteors: An Introduction to Planetary Science XMW (3) AS GLY
PR: Junior standing. Solar System exploration, from Aristotle to NASA. Modern views on the origins of meteorites, the Moon, Mars, Venus and other planetary bodies, and the methods of planetary study. Meteor impacts, their effects, future hazard. Space science as a tool in the study of the Earth. Field trips, lectures, Internet exercises.

GLY 4053 Theories and Arguments about the Earth MW (3) AS GLY
PR: 2000 level geology course. History of thinking about the Earth: context - geologic controversies; emphasis - geologic reasoning.

GLY 4310 Petrology (4) AS GLY
PR: GLY 3200. CI. The formation of igneous and metamorphic rocks in varying tectonic environments. Emphasis is placed on the identification of igneous and metamorphic rocks in hand specimens and thin sections. Lec-lab.

GLY 4550 Depositional Systems (4) AS GLY
PR: GLY 4552C. Study of modern sedimentary environments and their relationships to one another in order to understand environments preserved in the rock record. Physical, chemical, and biological aspects of terrestrial, transitional and marine sedimentary environments will be examined in light of their eventual preservation in the stratigraphic record.

GLY 4552C Sedimentary Geology and Geochemistry (4) AS GLY
PR: GLY 2010, GLY 3200, and one year of chemistry. A lecture and laboratory class that integrates knowledge of the lithosphere, atmosphere, biosphere, hydrosphere, and cyrosphere to study the sedimentary rock record. Examination of the rock record to solve problems in sedimentary processes.

GLY 4700 Geomorphology (4) AS GLY
PR: Senior or advanced junior standing or CI. Origin, evolution and distribution of land forms and soils. Dynamics of the earth’s surface. Lec-lab-field trips.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>GLY 4730</td>
<td>Marine Geology (3) AS GLY</td>
<td>PR: 12 hours of geology or CI. General survey of the geology of the ocean floor from beaches to ocean trenches including sediments, processes, tectonics and history.</td>
</tr>
<tr>
<td>GLY 4734</td>
<td>Beaches and Coastal Environments MW (3) AS GLY</td>
<td>A comprehensive introduction to the nature of all coastal environments including beaches, dunes, tidal inlets, estuaries, reefs, and river deltas. Emphasis will be on the natural state of these environments and how human activities have and will impact them. Consideration of management policies involving economics, ethics, policy, and environmental law.</td>
</tr>
<tr>
<td>GLY 4780</td>
<td>Geological Field Studies (1-3) AS GLY</td>
<td>PR: 1 geology course. Lectures and field trip to study modern geologic systems and interpret geologic origins of specific regions. Mapping and field description techniques introduced. Topic/destination of trip varies. Trip requires camping and vigorous physical activity. Lec. Field trip.</td>
</tr>
<tr>
<td>GLY 4970</td>
<td>Geology and Development of Modern Africa MW (3) AS GLY</td>
<td>An in-depth look at how geology has affected the politics, history and culture of Africa. Units include the Nile and hydrogeology, deserts and climate, rifting and hominid evolution, and mining and modern society.</td>
</tr>
<tr>
<td>GLY 4822</td>
<td>Introduction to Hydrogeology (4) AS GLY</td>
<td>PR: GLY 2010, advanced junior or senior standing, one year each physics and calculus or CI. Ground-water flow systems, ground-water geochemistry to ground-water and models of ground-water flow. Lec.-lab-field trips.</td>
</tr>
<tr>
<td>GLY 4905</td>
<td>Independent Study (1-3) AS GLY</td>
<td>PR: CI. S/U only. Specialized independent study determined by the student's needs and interests. Lec. Field trip.</td>
</tr>
<tr>
<td>GLY 4915</td>
<td>Undergraduate Research (1-3) AS GLY</td>
<td>PR: Senior or advanced junior standing and written permission of department prior to registration. S/U only. Individual experimental investigations with faculty supervision.</td>
</tr>
<tr>
<td>GLY 4920</td>
<td>Geology Colloquium (1) AS GLY</td>
<td>PR: Senior standing in Geology. S/U only. Weekly topical lectures by faculty graduates students and invited speakers.</td>
</tr>
<tr>
<td>GLY 4920</td>
<td>Topics in Geology (1-4) AS GLY</td>
<td>Each topic is under the direction of a faculty member with the content depending on the interests of the students and faculty involved. All areas of geology included.</td>
</tr>
<tr>
<td>GLY 4970</td>
<td>Undergraduate Honors Thesis (3) AS GLY</td>
<td>Open to seniors admitted to the Geology undergraduate honors program. Students will complete an independent research project under supervision of a faculty member, and present results in a senior thesis and a public presentation.</td>
</tr>
<tr>
<td>GLY 5752</td>
<td>Topics in Geology 2 (1-4) AS GLY</td>
<td>PR: Senior standing in geology or CI. Lectures and 2-3 week field excursions to study regional geology, structure and lithogenesis of geologically complex terrain. Mapping and outcrop description techniques introduced. Destinations are acquired. Trip requires camping and vigorous physical activity. Lec.-field trip.</td>
</tr>
<tr>
<td>GLY 5865</td>
<td>Statistical Models in Geology (3) AS GLY</td>
<td>PR: STA 2023 or equivalent or CI. Application of statistical methods to geological problems. Emphasis on sampling plans, nature of geologic distributions, and application of analyses of variance to solving geological problems. Lec.</td>
</tr>
<tr>
<td>GLY 5932</td>
<td>Selected Topics in Geology (1-4) AS GLY</td>
<td>PR: Senior or advanced junior standing. Each topic is a course under the direction of a faculty member, All areas of geology included.</td>
</tr>
<tr>
<td>GRE 1120</td>
<td>Beginning Classical Greek I (4) AS CLA</td>
<td>An introductory course in classical Greek grammar with appropriate readings.</td>
</tr>
<tr>
<td>GRE 1121</td>
<td>Beginning Classical Greek II (4) AS CLA</td>
<td>PR: GRE 1120 or equivalent. An introductory course in classical Greek grammar with appropriate readings.</td>
</tr>
<tr>
<td>GRE 2200</td>
<td>Intermediate Classical Greek (4) AS MLL</td>
<td>PR: GRE 1121 or equivalent. Readings in Greek at an intermediate level.</td>
</tr>
<tr>
<td>GRK 1120</td>
<td>Beginning Modern Greek I (4) AS MLL</td>
<td>CR: GRK 1120L. An intensive study of basic skills; pronunciation, listening comprehension, speaking and some composition.</td>
</tr>
<tr>
<td>GRK 1120L</td>
<td>Beginning Modern Greek I Laboratory (1) AS MLL</td>
<td>CR: GRK 1120. Concurrent enrollment with a lecture session is required, and, if dropped, then dropped simultaneously. S/U only. A laboratory designed to offer additional practice using various instructional technologies and media.</td>
</tr>
<tr>
<td>GRK 1211</td>
<td>Modern Greek II (4) AS MLL</td>
<td>PR: GRK 1120 or its equivalent. CR: GRK 1121L. A continuation of GRK 1120. An intensive study of basic skills; pronunciation, listening comprehension, speaking and some composition.</td>
</tr>
<tr>
<td>GRK 1211L</td>
<td>Modern Greek II Laboratory (1) AS MLL</td>
<td>CR: GRK 1121. Concurrent enrollment with a lecture session is required, and, if dropped, then dropped simultaneously. S/U only. A laboratory designed to offer additional practice using various instructional technologies and media.</td>
</tr>
<tr>
<td>GRK 2200</td>
<td>Modern Greek III (4) AS MLL</td>
<td>PR: GRK 1121 or the equivalent. For language students who intend to attain basic proficiency.</td>
</tr>
<tr>
<td>GRK 2201</td>
<td>Modern Greek IV (4) AS MLL</td>
<td>PR: GRK 2200 or its equivalent. Continuation of GRK 2200. Practice of writing, speaking and listening skills for language students who intend to attain basic proficiency.</td>
</tr>
<tr>
<td>GRK 4095</td>
<td>Directed Study (1-5) AS MLL</td>
<td>Departmental approval required. S/U only. Permits study options in Modern Greek not available in the regularly scheduled curriculum at departmental discretion.</td>
</tr>
<tr>
<td>GRK 4930</td>
<td>Selected Topics (1-5) AS MLL</td>
<td>Departmental approval required. Course permits classes in Modern Greek not available in the regularly scheduled curriculum at departmental discretion.</td>
</tr>
<tr>
<td>GRW 4905</td>
<td>Directed Reading (1-4) AS CLA</td>
<td>Departmental approval required.</td>
</tr>
<tr>
<td>GRW 5905</td>
<td>Directed Reading (1-4) AS CLA</td>
<td>Departmental approval required.</td>
</tr>
<tr>
<td>GRW 5934</td>
<td>Selected Topics (4) AS CLA</td>
<td>Available to majors and non-majors. Study of an author, movement or theme.</td>
</tr>
<tr>
<td>HAS 4120</td>
<td>Introduction to Public Health (3) PH CFH</td>
<td>A survey of policies and programs in public/community health with emphasis on specific needs and problems of Florida.</td>
</tr>
<tr>
<td>HBR 1120</td>
<td>Modern Hebrew I (4) AS MLL</td>
<td>CR: HBR 1120L. An intensive study of basic skills; pronunciation, listening comprehension, speaking and some composition.</td>
</tr>
<tr>
<td>HBR 1120L</td>
<td>Modern Hebrew I Laboratory (1) AS MLL</td>
<td>CR: HBR1120. Concurrent enrollment with a lecture session is required, and, if dropped, then dropped simultaneously. S/U only. A laboratory designed to offer additional practice using various instructional technologies and media.</td>
</tr>
<tr>
<td>HBR 1121</td>
<td>Modern Hebrew II (4) AS MLL</td>
<td>PR: HBR 1120 or its equivalent. CR: HBR1121L. A continuation of HBR 1120. An intensive study of basic skills: pronunciation, listening comprehension, speaking and some composition. More sophisticated oral/aural skills are attained. Basic reading skills are acquired.</td>
</tr>
<tr>
<td>HBR 1121L</td>
<td>Modern Hebrew II Laboratory (1) AS MLL</td>
<td>CR: HBR 1121. Concurrent enrollment with a lecture session is required, and, if dropped, then dropped simultaneously. S/U only. A laboratory designed to offer additional practice using various instructional technologies and media.</td>
</tr>
<tr>
<td>HBR 2200</td>
<td>Modern Hebrew III (4) AS MLL</td>
<td>PR: HBR 1121 or the equivalent. For language students who intend to attain basic proficiency.</td>
</tr>
<tr>
<td>HBR 4905</td>
<td>Directed Study (1-5) AS MLL</td>
<td>Departmental approval required. S/U only. Permits study options in Modern Hebrew not available in the regularly scheduled curriculum at departmental discretion.</td>
</tr>
<tr>
<td>HEB 1120</td>
<td>Basic Hebrew I (4) AS REL</td>
<td>Designed to give students a working knowledge of Classical (Biblical) Hebrew and to introduce them to the Biblical literature in the original language.</td>
</tr>
<tr>
<td>HEB 1121</td>
<td>Basic Hebrew II (4) AS REL</td>
<td>Designed to give students a working knowledge of Classical (Biblical) Hebrew and to introduce them to the Biblical literature in the original language.</td>
</tr>
<tr>
<td>HIS 2931</td>
<td>Special Topics (2-4) AS HTY</td>
<td>This course emphasizes a selected historical problem or issue. A variety of instructional approaches will be taken, and topics may vary.</td>
</tr>
<tr>
<td>HIS 3308</td>
<td>War and Society MW (3) AS HTY</td>
<td>An examination of the ways in which societies have organized themselves for war and how societies are changed by war. Also explores gendered expectations in war, and the changing conduct of war.</td>
</tr>
</tbody>
</table>
A survey of Medieval races. Especially recommended for students who later take which these concepts may be taught.

HUM 2243 Studies in Culture: The Twentieth Century HP (3) AS HUM
A historical survey of the visual arts, literature, music and thought of Europe from the Renaissance through the Twentieth century. Issues to be examined may include the relationship between science and the arts and the consequences of the growing contacts among world civilizations and the impact of technological change.

HUM 2420 Arts and Music of the African People (3) AS AFA
A thematic study of the arts, painting, sculpture, architecture and music of Sub-Saharan Africa; their meaning and impact on the arts and music of the Western World.

HUM 2930 Selected Topics (1-4) AS HUM
An introductory course dealing with a recurrent theme in the arts or focusing on a particular artistic center (a nation or city at a particular time).

HUM 3251 Studies in Culture: The Twentieth Century HP (3) AS HUM
Analyses of selected works of twentieth century art, including films, paintings, music, and literature, in the context of major political, social, and economic events, such as war, depression, totalitarianism, and technological change.

HUM 3271 Eastern and Western Culture from Antiquity to 1400 AF (3) AS HUM
A comparative treatment of music, visual arts, theatre, literature, and philosophy in the East and West, proceeding chronologically from Ancient times through the Middle Ages, emphasizing Europe and India.

HUM 3273 Eastern and Western Culture Since 1400 AF (3) AS HUM
A comparative treatment of music, visual arts, theatre, literature, and philosophy in the East and West, proceeding chronologically from the Renaissance through the present, emphasizing Europe, the United States, and India.

HUM 3930 Selected Topics in Humanities (1-4) AS HUM
Courses offered under this number will always be interdisciplinary, treating more than one art media and relating them historically or in some other way. The interdisciplinary emphasis on literature and the arts will be a larger theme in the course than the individual subject. Distinguished HUM courses from related courses offered in other departments of the university. Topics will vary; course may be repeated for credit with change of content.

HUM 4402 Humanities in India (4) AS HUM
PR: Sophomore standing or CI. Examples from the arts and letters of India and the relationship of these arts to the Hindu and Buddhist philosophy-religions.

HUM 4404 Humanities in China (4) AS HUM
PR: Sophomore standing or CI. Examples from the arts and letters of China; their relationship to Taoism, Confucianism and other Chinese philosophies; Western influences on twentieth century Chinese arts and letters.

HUM 4405 Humanities in Japan (4) AS HUM
PR: Sophomore standing or CI. Examples from the arts and letters of Japan, their relationship to Zen Buddhism and other Japanese philosophy-religions; Western influences on twentieth century Japanese arts and letters.

HUM 4432 The Culture of Ancient Rome (4) AS HUM
PR: Sophomore standing or CI. A study of the poetry, drama, philosophy, historical writing, painting, sculpture and architecture of ancient Rome, including such authors as Virgil, Livy, and Cicero, the monuments of Rome, Pompeii, and Herculaneum.

HUM 4433 Ancient Greek Culture (4) AS HUM
PR: Sophomore standing or CI. A study of the poetry, drama, philosophy, historical writing, painting, sculpture and architecture of ancient Greece, including such authors as Homer, Sophocles, and Plato, and monuments such as the Parthenon.

HUM 4435 Early Medieval Culture (4) AS HUM
PR: Sophomore standing or CI. A study of the culture of Europe and the Mediterranean world from the 4th to the 11th centuries through the readings of early Medieval historians, poets, and theologians, as well as the study of illuminated manuscripts, mosaics, painting and sculpture and architecture.

HUM 4436 High Medieval Culture (4) AS HUM
PR: Sophomore standing or CI. A study of the culture of Western Europe from the 11th to 14th centuries. Readings will include poetry and religious works; examples of painting, architecture, sculpture and music will be studied.

HUM 4437 Italian Renaissance Culture (4) AS HUM
PR: Sophomore standing or CI. A study of the painting, literature, music, sculpture and architecture of early modern Italy (1300-1600), emphasizing humanism, the revival of antiquity, the tension between medieval Europe. Issues to be examined may include the dialogue between local traditions and cosmopolitan cultures, the relationship of the individual to society, and the bases for moral values.
sacred and secular, and artists such as Michelangelo, Titian, Raphael, and others.

HUM 4438 Northern Renaissance Culture (4) AS HUM
PR: Sophomore standing or CI. A study of the Northern Renaissance, 1400-1580, as exemplified in Germany, France, the Netherlands, England, and Spain. The course includes painting, architecture, literature, and music, with special study of Durer, Van Eyck, El Greco, and Bosch.

HUM 4440 Arts and Letters in the 17th and 18th Centuries (4) AS HUM
PR: Sophomore standing or CI. A study of the visual arts, literature, and music from the mysticism and ornament of the Baroque to the rationalism and classicism of the Enlightenment, including such artists, authors and composers as Rembrandt, Gentileschi, Voltaire, Bach, and Mozart.

HUM 4442 Arts and Letters of the Romantic Period (4) AS HUM
PR: Sophomore standing or CI. Continental masterworks of fiction, painting, and music in the context of European cultural history from the French Revolution to the Revolutions of 1848.

HUM 4444 Nineteenth Century European Arts and Letters (4) AS HUM
PR: Sophomore standing or CI. A study of continental literary, musical, and artistic masterworks from the Revolutions of 1848 until the outbreak of World War I.

HUM 4445 Twentieth Century Arts and Letters I (4) AS HUM
PR: Sophomore standing or CI. Analysis of selected works of twentieth century art. The course will focus on a particular phase in the development of modernism, a set of themes, or certain stylistic aspects of various arts of the twentieth century.

HUM 4446 Twentieth Century Arts and Letters II (4) AS HUM
PR: Sophomore standing or CI. Analysis of selected works of twentieth century art. The course will focus on a particular phase in the development of modernism, a set of themes, or certain stylistic aspects of various arts of the twentieth century.

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

HUM 4453 Twentieth Century American Culture (4) AS HUM
PR: Sophomore standing or CI. Study of selected works, tracing the course of expansion in the production and enjoyment of works of art, and interaction between the idealistic and pragmatic concerns for development of the arts in the 20th century.

HUM 4462 Ancient Latin American Culture (4) AS HUM
PR: Sophomore standing or CI. Analysis of selected Latin American works of art in their cultural context, with emphasis on major art forms selected from the Pre-Columbian period.

HUM 4464 Latin American Culture Study 1487 (4) AS HUM
PR: Sophomore standing or CI. Analysis of selected Latin American works of art in their cultural context, with emphasis on major art forms selected from the colonial through contemporary periods.

HUM 4905 Directed Study (1-4) AS HUM
PR: CI. Special individual study determined by the student's needs and interests.

HUM 4909 BIS Humanities, Independent Study (15) AS BIS
SW only

HUM 4930 Selected Topics in Humanities (1-4) AS HUM
PR: Sophomore standing or CI. This course will deal with a recurrent theme in the arts as, for example, love or death, or will focus on artistic centers such as Renaissance Florence or Paris in the 1920s. Topics will vary.

HUM 4931 Seminar in Humanities 6A (4) AS HUM
PR: Humanities major or CI; Senior standing. Discussion of interdisciplinary humanities. Includes essay.

HUM 4934 Major Issues in the Humanities MW (3) AS HUM
The study of an important topical issue in the Humanities. Materials representing diverse views relating to that issue will be read, and works of art in different media that have relevance to the debate will be studied. Available to majors and non-majors.

HUM 4939B BIS Humanities, Seminar (15) AS BIS
PR: BIS HUM 4909 or CI. S/U only

HUM 4940 Internship in Humanities (1-4) AS HUM
A structured, out-of-class learning experience providing firsthand, practical training in Humanities-related professional careers in the community.

HUM 4941 Study on Location (1-4) AS HUM
The art of a culture will be examined during travel in groups, led by an instructor, to important cities or sites. Monuments, museums, architectures, plays, and/or concerts will be studied. Reading assignments and lectures.

HUM 2201 Nutrition (3) NU NUR
PR: Course work in chemistry and biology or permission of faculty. One hour for majors and non-majors. The study of fundamental principles of normal nutrition as they relate to human life and growth from conception through senescence, interpretation of current nutrition information, and application of nutrition knowledge in the establishment of good eating habits.

HUS 3001 Introduction to Human Services (3) AS GEY
An introduction to the field of human services. Study of the professions and agencies involved in providing human services. Analysis of the values and ethics of various professional associations.

HUS 4020 The Life Cycle (4) AS GEY
An examination of individuals and the physiological and psychosocial changes which occur during infancy, childhood, adolescence, young adulthood, middle age and old age.

HUS 4100 Interviewing (3) AS GEY
The principles and techniques of interviewing. Use of interviewing in information gathering, research and helping relationships and developing skills in communication across cultural, social and age barriers.

IDH 2009 Discovery: People, Processes and Problems (3) UG HON
PR: Admission to Honors Program. An appreciation of the research process in multiple disciplines culminating in the production of a collaboratively developed research proposal.

IDH 2010 Acquisition Of Knowledge (3) UG HON
PR: Admission into the Honors Program. An appreciation of the processes by which human understanding proceeds through operations such as perception, classification, and inference, among others, as well as the open philosophical questions behind these operations.

IDH 3100 Arts/Humanities Honors (3) UG HON
PR: IDH 2010. An introduction to western arts and letters from the perspectives of three period's terms (classicism, romanticism, and modernism), the relationship of ideas to art, the similarities among the arts of a given period, and important differences between periods.

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

IDH 3400 Social and Behavioral Sciences Honors (3) UG HON

IDH 3600 Seminar In Applied Ethics (3) UG HON
PR: IDH 2010. This course explores ethical issues related to selected topics such as Ethics and Technology, Ethics in Business, Bio-Medical Ethics, Personal Ethics Development.

IDH 4000 Honors Program Seminar: Major Works/Majors Issues (4) UG HON
PR: IDH 2010. This course explores major works and major issues in a variety of disciplines. Each section will be devoted to content in a different academic area.

IDH 4200 Geographical Perspectives Honors (3) UG HON
PR: IDH 2010. An introduction to African, Latin American, Middle Eastern, or Asian perspectives focusing on social, political and economic, artistic, cultural and intellectual subject matter. The material will be presented within a geographical, chronological, and humanities background.

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

IDS 2130 Biology for Learning Communities (3) AS IAS
This course is an introduction to major concepts of biology, focusing on evolution as the unifying concept in the field.

IDS 2664 Social Science Perspectives I (3) AS IAS
Provides an overview of the evolution and global expansion of Western Civilization. Examines global problems of economic growth and development; geopolitical relations among nations and states, food supply and hunger, and environmental change.

IDS 2665 Social Science Perspectives II (3) AS IAS
Approaches the study of human behavior and society using the lens of various institutions. The course addresses issues of social stratification, economics, education, religion and social status. The course is not restricted to any major, has no lab section, and is not cross-listed.

IDS 2666 Historical Perspectives I (3) AS IAS
Approaches the study of human history through a series of specific case studies that focus on historical processes. The primary focus
of the course is to understand the variety of ways that the past has been brought into and understood in the present, rather than a comprehensive survey of a limited time or place.

IDS 2667 Historical Perspectives II (3) AS IAS
Approaches the study of human history through a series of specific case studies that focus on historical processes. The primary focus of the course is to understand the variety of ways that the past has been brought into and understood in the present, rather than a comprehensive survey of a limited time or place.

IDS 2931 Selected Topics HP (2-5) AS IAS
Selected topics in the liberal arts. A basic introduction to the substance and theory of contemporary topics in the arts and sciences.

IDS 2932 Selected Topics HP (3) AS IAS
Selected topics in the liberal arts and sciences.

IDS 2933 Selected Topics III SS (3) AS IAS
Selected topics in the Liberal Arts. A basic introduction to the substance and theory of contemporary topics in the arts and sciences.

IDS 2934 Selected Topics IV SS (3) AS IAS
Selected topics in the Liberal Arts. A basic introduction to the substance and theory of contemporary topics in the arts and sciences.

IDS 2935 Selected Topics V FA (3) AS IAS
Selected topics in the Liberal Arts. A basic introduction to the substance and theory of contemporary topics in the arts and sciences.

IDS 2936 Selected Topics VI AF (3) AS IAS
Selected topics in the Liberal Arts. A basic introduction to the substance and theory of contemporary topics in the arts and sciences.

IDS 3115 Values and Choices 6A MW (3) ED EDF
An in-depth examination of values and their relationship to choices in contemporary society using historical perspective and inquiry of moral/ethical dilemmas. Available to majors or non-majors.

IDS 3662 Arts Connections FA (3) FA FAI
This interdisciplinary course covers the arts disciplines of music, dance, theatre, and art. Artists from the four disciplines will provide weekly presentations centered around issues and ideas that have formed the basis of their creative research. Influences of diversity, new methods of community and public arts will be explored. This course will introduce students to the role the arts play in shaping their perceptions of the world as well as reflecting the underlying values and paradigms that form our culture(s).

IDS 3663 Critical Issues Affecting the Arts MW (3) FA FAI
PR: Junior standing or Cl. A discussion-based examination of cultural trends, educational policies, governmental regulations, and financial factors which impact Art, Dance, Music, and Theatre.

IDS 3672 Written Culture: Images of Culture in the Modern World (3) AS IAS
Offers multiple perspectives on the visions, theories, and practices of the modern culture through the use of various literary genres. Examines the cultural realities of social stratification, relational networks, faction, division, inter-connectedness, diversity, poverty, and anomie, energy, and potential of modern living.

IDS 3949 Cooperative Education (0) UG COE
60 hours of academic credit, acceptance in Cooperative Education Program. S/U only.

IDS 4910 Community Research (1-4) AS CEL
PR: CEL Program approval. Repeatable up to 8 credit hours. To provide students with a community related research experience.

IDS 4930 Selected Topics (1-4) AS IAS
Course content determined by students' and instructor's interests and needs.

IDS 4932 Honors Program Seminar (3) UG HON
PR: Admission to St. Petersburg Campus Honors Program. An intensive reading and research seminar focusing on interdisciplinary investigation of broad topics in the humanities and social and natural sciences. Topics will vary, but all possess an interdisciplinary format. Restricted to St. Petersburg Campus Honors Program students.

IDS 4942 Community Internship (1-4) AS CEL
PR: CEL Program approval. Repeatable up to 8 credit hours. To provide students with a community internship experience.

IDS 4955 Internat Community Research (1-2) AS CEL
PR: CEL Program approval. Repeatable up to 8 credit hours. To provide students with an international community research experience.

IDS 4956 International Community Internship (1-4) AS CEL
PR: CEL Program approval. To provide students with an international community internship experience. Repeatable up to 8 credits.

IDS 4970 Honors Program Thesis (3) UG HON
Enrollment is limited to St. Petersburg Campus Honors Program students who have completed at least one Honors Program Seminar. The Honors Thesis is designed as a senior thesis for St. Petersburg Campus Honors Program students. Those students will have completed at least one Honors Seminar prior to beginning the Thesis. Either a thesis or an Honors Project will fulfill the requirements for graduation as St. Petersburg Honors Program students.

IDS 4990 BIS Inter-Area Studies (30) AS BIS
PR: ISS 4909, ISS 4939, ISC 4909, ISC 4939, HUM 4909, HUM 4939. S/U only.

INR 2011 Applied Psychology SS (3) AS PSY
The application of psychological principles and the functions of psychologist in education, government, industry, and clinical practice.

INR 4004 Industrial Psychology (3) AS PSY
PR: PSY 3213 with a grade of C or better or Cl. Applications of psychological principles to industry. Topics include: selection, training, motivation, job satisfaction, supervision, decision-making.

INR 1015 World Perspective SS AF (3) AS INT
An interdisciplinary study of the international system, world problems and values.

INR 2002 Introduction to International Relations (3) AS POL
Concepts and analytical tools applied to events such as politics among nations, control of foreign policies, types of actors, war and peace as a science.

INR 3003 Introduction to International Studies (3) AS INT
An interdisciplinary study which stresses methods and analysis. A major portion will focus on the roles which different disciplines play in the international system.

INR 3018 World Ideologies MW (3) AS INT
A course which details and examines the ideologies of today's independent countries; analyzing them in their political, social, cultural and historical contexts.

INR 3033 International Political Cultures MW (3) AS INT
This course explores the interaction of political ideologies in the various cultures of the world and their effect on the world system.

INR 3038 International Wealth and Power SS (3) AS INT
Introduction to the relationship between politics and economics, emphasizing the analysis of government policies in response to both domestic and international economic problems.

INR 3054 International Human Rights MW (3) AS INT
This course explores the evolution of international human rights from the Greeks to the present. It examines human rights issues in major regions of the world.

INR 3084 International Terrorism SS AF (3) AS INT
A study of contemporary international terrorism and its causes, ranging from national liberation movements to networks of philosophical anarchists.

INR 3102 American Foreign Policy (3) AS POL
Analysis of the development and scope of United States foreign policy, emphasizing goals and objectives, policy formulation and implementation, themes and issues.

INR 3141 Global Security Policy (3) AS INT
A study of security issues, regional and global (such as proliferation, arms control, arms transfer) as they relate to contemporary international politics.

INR 3336 Intelligence and U.S. Foreign Policy (3) AS INT
An examination of the role of intelligence and the intelligence community in U.S. foreign policy, with emphasis on the period since World War II.

INR 3955 Overseas Study (1-6) AS INT
A program of individual or group research in a foreign country.

INR 4035 International Political Economy (3) AS POL
Analysis of the causes of the international economic system, focusing on questions of cooperation and conflict in trade, aid, and investment relationships.
INR 4089 Conflict In The World MW (3) AS INT
PR: Junior/Senior standing. An interdisciplinary course examining theories of conflict, conflict resolution processes and strategies, theories and peacemaking strategies, and the concept of Early Warning Systems related to the outbreak of conflict.

INR 4250 The Political Economy of the Southern Nations SS AF (3) AS INT
A multidisciplinary study of the efforts of the nations in the South (Africa, Asia, Latin America and the Middle East) to improve their status through political and economic development.

INR 4254 Africa and the World MW (3) AS INT
An examination of Africa's place and role in world affairs, including an analysis of the impact of external forces, international relations in post-colonial Africa, the relations of African states with the major world powers, the U.N. and its agencies.

INR 4334 Defense Policy (3) AS POL
Analytic institutional factors contributing to formulation of defense policy and the impact of such policy on international relations.

INR 4403 International Law SS (3) AS POL
Examines essential components of the international legal system; recognition; succession; sea, air and space law, treaties, diplomas, International Court of Justice; laws of war, etc. Introduces the student to legal reasoning as employed in the international context.

INR 4502 International Organizations SS AF (3) AS POL
Study of the operations and structure of international organizations and effects on world politics; background and achievement of the UN; regional organizations and multi-national corporations.

PR: MAC 2231, MAC 2232 or MAC 2233.
PR: A supervised program of intensive reading of interdisciplinary materials in areas of specific interest.

INR 4910 Directed Research (1-3) AS INT
PR: CI. A supervised program of interdisciplinary research in areas of specific interest.

INR 4931 Selected Topics (1-4) AS INT
Interdisciplinary studies with course content dependent on student demand and instructor's interest.

INR 4936 Senior Seminar MW (3) AS INT
PR: International Studies major and senior standing. A variable topics seminar integrating concepts and analyses relating to the academic background of INT majors. Should be taken in the student's final semester.

INR 4943 Internship in International Studies (3-6) AS INT
PR: Senior status. S/U only. For majors only. The purpose of the course is to promote the student's understanding of global international issues within a local and practical context.

INR 5086 Issues in International Relations (3) AS POL
Sr/GS Explores specific topics and provides the student with an opportunity for in-depth study of historical and contemporary international relations.

ISC 1004 Integrated Natural Sciences I: Science that Matters NS (3) AS CHM
Discussion of integrative concepts in biology, chemistry, geology, and physics based on major knowledge strands of the Florida and Natural Science Education Standards. This course deals with current topics relevant to students, is inquiry based, and emphasizes development of higher order (critical thinking) skills through active learning strategies.

ISC 1005 Integrated Natural Sciences II: Science that Matters NS (3) AS CHM
Discussion of integrative concepts in biology, chemistry, geology, and physics based on major knowledge strands of the Florida and Natural Science Education Standards. This course deals with current topics relevant to students, is inquiry based, and emphasizes development of higher order (critical thinking) skills through active learning strategies.

ISC 4906 BIS Natural Sciences, Independent Study (15) AS BIS
S/U only

ISC 4930 Selected Topics in Interdisciplinary Science (1-4) AS IAS
Interdisciplinary studies with cell and molecular biology perspective. Course content dependent on student demand and instructor's interest.

ISC 4939 BIS Natural Sciences, Seminar (15) AS BIS
PR: BIS ISC 4909 or CI. S/U only

ISM 3011 Management Information Systems (3) BA QMB
PR: CGS 2100; ACG 2021; ACG 2071 or equivalent. May not be counted toward major requirements in MIS. The study of information management information requirements and information systems in modern organizations.

ISM 3113 Systems Analysis and Design (3) BA QMB
PR: ISM 3011, ISM 3250, with a grade of "C" or better. Study of the techniques and procedures used in assessing information requirement...
ISS 4900 Decision Support Systems Applications-Computer
Assisted Decision Making (3) BA QMB
PR: FIN 3403, QMB 3200, and ISM 3113, with a grade of "C" or better, MIS major or CC. This course is designed to familiarize students with the opportunities and challenges associated with the application of current, emerging, and developing systems to support decision making in business organizations.

ISM 4480 Electronic Commerce Systems (3) BA QMB
PR: ISM 3011 with a grade of "C" or better, MIS major or CC. This course is designed to familiarize students with the opportunities and challenges associated with the application of current, emerging, and developing technologies used in implementing electronic commerce systems, and to develop the practical skills needed to design and develop effective Web pages.

ISM 515 Independent Study (1-6) BA QMB
S/U Independent study as directed by designated faculty.

ISM 4930 Selected Topics in MIS (1-3) BA QMB
Selected topics in MIS.

ISM 4950 Independent Research (1-6) BA QMB
PR: CI. Individual study contract with instructor and department chairperson required. The research project will be mutually determined by the student and instructor.

ISM 1101 Knowledge and Society SS (3) AS ISS
Course introduces topics concerning the relationship between knowledge and society. Among the issues addressed are: competing accounts of knowledge and the relationship between knowledge and other forms of human experience and different aspects of social life such as religion, morality, aesthetics, politics, and gender.

ISM 1102 Self and Society SS (3) AS ISS
Course introduces students to issues concerning the relationship between the individual and society; and how our understanding of the self is shaped by gender and culture.

ISM 1103 Nature and Culture SS (3) AS ISS
This course examines competing ideas and theories concerning the relationship between nature and culture. Among the issues addressed are: competing accounts of nature and the relationship between nature and other forms of human experience and different aspects of social life such as religion, morality, aesthetics, politics, and gender.

ISM 3010 Introduction to the Social Sciences (3) AS ISS
Integrates the range of social science fields into a global interdisciplinary perspective. Views social institutions and issues from perspectives of changing paradigms.

ISM 3930 Selected Topics in the Social Sciences (1-4) AS ISS
Interdisciplinary studies of varying topics, with course content dependent on student demand and instructor's interest.

ISM 4151 Native American Women (3) AS ISS
An interdisciplinary examination of lives of Native American Women, past and present. Topics may include history, education, politics, economics, family, etc. Open to all makeup.

ISM 4162 The City and Urbanization (3) AS ISS
An interdisciplinary perspective will be used to analyze the emergence of the city, urban revolution and metropolis. Urban planning and governance and human ecology perspective will be examined in looking at how urban areas deal with social and physical problems.

ISM 4164 Urban Social Issues: An Interdisciplinary Approach (3) AS ISS
This course is designed to examine current metropolitan issues from an interdisciplinary perspective. Topic selection will be within the broad framework of technological changes, economic conditions, political ideologies, human ecology, and their impact on changing social patterns.

ISM 4909 Directed Readings (1-3) AS ISS
PR: CI. A supervised program of intensive reading of interdisciplinary materials in areas of specific interest.

ISM 4910 Directed Research (1-3) AS ISS
PR: CI. A supervised program of interdisciplinary research in areas of specific interest.

ISM 4935 Seminar in the Social Sciences MW (3) AS ISS
PR: Senior standing and ISM 3010 or CI. The seminar which caps the interdisciplinary major. Weds personal curiosity with the application of theoretical models to research on salient social issues.

ISM 4939 ISM Social Sciences, Seminar (15) AS ISS
S/U Independent study as directed by designated faculty.

ISM 5934 Selected Topics (1-3) AS AFA
PR: CI plus senior standing or graduate status. Interdisciplinary studies with course content dependent on student demand and
including examination and interpretation of public documents and records.

JOU 425S: Newspaper Design and Typography (3) AS COM
PR: JOU 2200 or DFP. Theoretical and practical applications of newspaper design; problems in newspaper layout; the research of newspaper typography and design and its application; redesign of contemporary newspapers.

JOU 4914 Editing for Literature (1) AS COM
PR: Senior standing, JOU 2200 and CI. For news-editorial sequence majors. S/U only. Practical experience outside the classroom where the student works for academic credit under the supervision of a professional practitioner. Periodic written and oral reports to the faculty member coordinating the study.

JOU 4944 Magazine Practicum (1) AS COM
PR: Senior standing and CI. For magazine sequence majors. S/U only. Practical experience outside the classroom where the student works for academic credit under the supervision of a professional practitioner. Periodic written and oral reports to the faculty member coordinating the study.

JOU 5305 Newswriting and Editing (3) AS COM
PR: GC in Mass Communications or CI. Introduction to the basics of gathering, writing, and editing the news, with an emphasis on practical assignments done under professional conditions and standards. Discussions, readings emphasize the larger context and implications of news.

JOU 5305 Explorations in Newswriting (3) AS COM
PR: CC. Students work to develop writing styles, reporting on and creating stories about significant issues, events, and ideas. The course explores the notion that narrative-style journalism can be accurate, thorough, fair, and compelling, effectively bringing readers into stories and giving them a bigger stake in the news. The focus is on going beyond traditional practices of reporting and writing news stories.

JPN 1120 Modern Japanese I (4) AS MLL
CR: JPN 1120L. An intensive study of basic skills: pronunciation, listening comprehension, speaking, and some composition.

JPN 1120L Modern Japanese I Laboratory (1) AS MLL
CR: JPN 1120. Concurrent enrollment with a lecture session is required, and, if dropped, then dropped simultaneously. S/U only. A laboratory designed to offer additional practice using various instructional technologies and media.

JPN 1121 Modern Japanese II (4) AS MLL
PR: JPN 1120 or equivalent. CR: JPN 1121L. A continuation of JPN 1120. More sophisticated oral/aural skills are attained. Basic reading skills are acquired.

JPN 1121L Modern Japanese II Laboratory (1) AS MLL
CR: JPN 1121. S/U only. Concurrent enrollment with a lecture session is required, and, if dropped, then dropped simultaneously. A laboratory designed to offer additional practice using various instructional technologies and media.

JPN 2200 Modern Japanese III (3) AS MLL
PR: JPN 1121 or equivalent. Continuing study to attain basic proficiency in Japanese.

JPN 2201 Modern Japanese IV (3) AS MLL
PR: JPN 2200 or equivalent. Continuation of JPN 2200.

JPN 4905 Directed Study (1-5) AS MLL
Departmental approval required. S/U only. Permits study options in Japanese not available in regularly scheduled curriculum at departmental discretion.

JPN 4930 Selected Topics (1-5) AS MLL
Departmental approval required. Course permits study options in Japanese not available in the regularly scheduled curriculum at departmental discretion.

LAE 4314 Language Arts in Childhood Education (3) ED EDE
PR: Admission to the College of Education. Implementing a coordinated and integrated language arts curriculum and guiding the development of language experiences of children in elementary school. Explores the content, organization, and instruction of oral and written expression in childhood education.

LAE 4323 Methods of Teaching English: Middle School (3) ED EDE
Must be taken one or two semesters prior to internship. Recommended to be taken with LAE 4464. Whole language methods of integrating reading, writing, speaking, listening, viewing, and critical thinking activities into a literature-based program for middle school students.

LAE 4414 Literature in Childhood Education 6A LW (3) ED EDE Jr./Sr. Standing. The selection, evaluation and use of fiction, nonfiction and poetry for instructional, informational, and recreational purposes in the classroom.

LAE 4464 Adolescent Literature for Middle and Secondary Students 6A LW (3) ED EDE
PR: English Education majors or CI. Recommended to be taken with LAE 4323 two semesters prior to internship. A study of the types of literature read by adolescents with an emphasis upon the criteria for the choice of good books and knowledge of available books and reading materials.

LAE 4530 Methods of Teaching English: Practicum (3) ED EDE
PR: Senior standing or enrollment in Plan II Master's Program. Required concurrently with LAE 4530 or LAE 4642. Taken one semester prior to internship.

LAE 4642 Methods of Teaching English: High School (3) ED EDE
PR: LAE 4464. Must be taken one semester prior to internship concurrently with LAE 4530. Whole language methods of integrating reading, writing, speaking, listening, viewing, and critical thinking activities into a literature-based program for high school students.

LAE 4936 Senior Seminar in English Education (2) ED EDE

LAE 4940 Internship: English Education (1-12) ED EDE
S/U only. One full semester of internship in a public or private school. Intended to take Senior Seminar in English Education concurrently. In special programs where the intern experience is distributed over two or more semesters, student will be registered for credit which accumulates from 9 to 12 semester hours.

LAE 5932 Selected Topics in the Teaching of English (3) ED EDE
PR: Certification in English and/or Mass Communications and approval of graduate advisor. Investigation of topics which are of special interest to the student and are related to the teaching of English. Topics will be selected by the student in accordance with his particular goals and will be approved by the student's graduate advisor.

LAH 2020 Latin American Civilization HP AF (3) AS HTY
An introduction to the issues, events, and people in Latin American history from 1492 to the present. Focus on Argentina, Brazil, Chile, Cuba, and Mexico. Intended for students in any discipline; no prerequisites. An entry-level course for Latin American studies.

LAH 2734 Latin American History in Film HP AF (3) AS HTY
Through the use of films and readings, the course introduces the broad sweep of Latin American history from the pre-Columbian period to today. Emphasis is placed on the social-cultural context to understand the peoples and events that have shaped Latin America.

LAH 3130 Colonial Latin America (4) AS HTY
Placing emphasis on indigenous people this course examines pre-Columbian culture and the interaction between native peoples and Europeans in the wake of the conquest.

LAH 3200 Modern Latin America (4) AS HTY
A study of the emergence of the Latin American states. The course will examine developments in Latin America during the nineteenth and twentieth centuries. Special attention is given to the Third World character of the region.

LAH 3430 History of Mexico (4) AS HTY
Mexican history from pre-Columbian cultures to the twentieth century. Emphasis is placed on the colonial period, development, the wars of independence, development of the 19th century Mexican state and the Mexican revolution.

LAH 3470 History of the Caribbean (4) AS HTY
A thematic study of the circum-Caribbean from pre-Columbian cultures to the twentieth century, emphasizing the development of the Caribbean political economy with emphasis on monoculture, plantation society, and colonial/neo-colonial relationships.

LAH 3480 History of Cuba (4) AS HTY
Cuban history from pre-Cuban cultures to the Cuban Revolution. Emphasis on colonization, the sugar economy, the struggles for independence, the political economy of the Republic, and the 20th century revolutionary process.

LAS 3002 Latin American History INT
Area study courses are multi-disciplinary in nature and deal with one or more countries of a region. Each course combines some measure of political, economic, historical, religious, geographic, anthropological, and sociological analysis in dealing with salient features and current problems.

LAS 3004 The Americas - Latin and Caribbean (3) AS INT
This is a telecourse that is designed to introduce the complexities of Latin America and the Caribbean to students in the U.S. (Open University - television, telephone, and computer) courses.

LAS 3118 Latin America Through Film AF (3) AS INT
This course will use film, video, selected readings, and lectures to teach the interested student about Latin America.

LAT 1110 Beginning Latin II (4) AS CLA
An introductory course in Latin grammar with appropriate readings.

LAT 1121 Beginning Latin II (4) AS CLA
PR: LAT 1120 or equivalent. An introductory course in Latin grammar
LIS 5268 Microcomputer Applications Library and Information Centers (3) AS LIS
Microcomputer hardware and software for libraries and their application in library/information settings. Projects using major applications for budgets, databases, and telecommunications are undertaken.

LIS 5315 Instructional Graphics (3) AS LIS
Theoretical aspects, planning and production of instructional graphic material. The theory of graphic communications. Interpreting needs for instructional materials appropriate for given behavioral objectives.

LIS 5333 TV in Schools and Libraries (3) AS LIS
Small format video tape recordings and the utilization of open and closed broadcasts in schools and libraries.

LIS 5404 Foundations of Library and Information Science (3) AS LIS
Introduction to the study of library and information science, history, organization; specialized literature; outstanding leaders; current trends, issues, and problems; the place of the information agency in society with its contributions to that society.

LIS 5937 Selected Topics in Library Studies (1-4) AS LIS
Covers a variety of topics in such areas as collection development, reference services, technical services, and administration.

LIT 2000 Introduction to Literature 6A HP (3) AS ENG
Will not be counted toward the English major. The nature and significance of literature in its various forms: fiction, drama, poetry; emphasis on the techniques of reading literature for informed enjoyment.

LIT 2010 Introduction to Fiction 6A HP (3) AS ENG
Will not be counted toward the English major. A study of the short story and novel as literary forms; approached from an historical perspective though not restricted to any historical period.

LIT 2021 Current Short Fiction (3) AS ENG
Will not be counted toward the English major. Traditional and experimental short stories of this generation: such writers as Updike, Malamud, O’Connor, Roth, Barth, Ionesco, and Bartheleme.

LIT 2030 Introduction to Poetry 6A HP (3) AS ENG
Will not be counted toward the English major. A study of the poem as literary form; approached from an historical perspective though not restricted to any historical period.

LIT 2040 Introduction to Drama 6A HP (3) AS ENG
Will not be counted toward the English major. A study of the major forms of as literature and theatre; approached from an historical perspective though not restricted to any historical period.

LIT 2931 Selected Topics in English Studies (3) AS ENG
Will not be counted toward the English major. Varying from semester to semester, the course examines in depth a predominant literary theme or the work of a select group of writers.

LIT 3022 Modern Short Fiction (3) AS ENG
A study of the novella from the nineteenth century to the present. Writers include James, Dostoevsky, Camus, Styron, Nabokov, Gardner, Roth, Vonnegut, among others.

LIT 3043 Modern Drama (3) AS ENG
A study of such modern and contemporary dramatists as Ibsen, Strindberg, Chekhov, Pirandello, Shaw, O’Neill, Pinter, Stoppard, Brecht, Beckett, and Ionesco.

LIT 3073 Contemporary Literature 6A LW (3) AS ENG
An introduction to the fiction, poetry, and drama written since 1945—American, British, Continental, or Multicultural. Focus may be on one, two, or all three genres or on works from any combination of nationalities. Also focuses on values/ethics, race and gender, thinking and writing skills.

LIT 3101 Literature of the Western World Through the Renaissance 6A (3) AS ENG
A study in English of the great works of Western Literature from its beginnings through the Renaissance, including the Bible, Homer, Sophocles, Plato, Euripides, Virgil, Cicero, Dante, Petrarch, Machiavelli, and Rabelais, among others.

LIT 3102 Literature of the Western World Since the Renaissance 6A (3) AS ENG
A study in English of the great works of Western Literature from the Neoclassic to the Modern Period, including such writers as Moliere, Racine, Voltaire, Dostoevsky, Chekhov, Ibsen, Kafka, Gide, Sartre, and Camus, among others.

LIT 3103 Great Literature of the World 6A MW LW (3) AS ENG
PR: Junior/Senior Standing. Will not be counted toward the English major. A survey of world literature including samples from the ancient and modern era, western and eastern traditions, male and female writers, and various racial, ethnic, and gender issues. Focus on values/ethics, race, ethnicity, and gender; thinking and writing skills.

LIT 3144 Modern European Novel 6A HP (3) AS ENG
A study of the Modern European novel in translation as it developed from the nineteenth century to the present, including such writers
as Dostoievsky, Flaubert, Kafka, Hesse, Camus, and Sozhenitsyn.

LIT 3155 Modern Literature 6A HP MW LW (3) AS ENG
Examines major literary works of the 20th Century written in English and explores several ways authors have expressed the age, its great issues and conflicts, in order to gain an historical perspective that will help relate the present to the recent past. Designed for non-majors, but majors may take it by special arrangement.

LIT 3391 Cultural Studies and the Popular Arts 6A MW LW (3) AS ENG
A study of twentieth century culture as it is represented in the film, fiction, and other cultural artifacts of many different nationalities. Focuses on values/ethics, race, ethnicity and gender, thinking and writing skills.

LIT 3374 The Bible As Language MW (3) AS ENG
May be counted once toward the English major. However, can be taken twice. Fall semester is Old Testament and Spring semester is New Testament. Either can count toward the major. Major emphasis on literary types, literary personalities of the Old and New Testaments, and Biblical archetypes of British and American literary classics. Fall, Semester, Old Testament; Spring Semester, New Testament. Focuses on values/ethics, race, ethnicity and gender, thinking and writing skills.

LIT 3383 The Image of Women in Literature 6A MW LW (3) AS ENG
A study that seeks to trace the prongs of contemporary views about women, to analyze major Eastern/Western literary portrayals of women, to examine ideas about women's roles, and to compare/contrast cultural/racial images of women.

LIT 3410 Religious Extremism (3) AS ENG
Theological and philosophical ideas, allusions, and symbols in the writings of Dostoievsky, Nietzsche, Mann, Joyce, Eliot, Camus, Sartre, among others.

LIT 3451 Literary History and the Occult 6A MW LW (3) AS ENG
Will not be counted toward the English major. An introduction to the occult tradition as a major ingredient in English, Continental, American, and Multicultural literature; analysis of the origins, classifications and analysis of the various magic arts from classical times through the present. Focuses on values/ethics, race/ethnicity and gender, thinking and writing skills.

LIT 3700 Survey of Poetry (3) AS ENG
A chronological sampling of the major poems written in English from the Middle Ages to the present. Recommended as the first course in the poetry option.

LIT 4385 British and American Literature by Women 6A MW LW (3) AS ENG
Surveys women's literary tradition in England and America from the seventeenth century to the present. Thematic focus includes self, marriage, sexuality, madness, race and generations. Open to majors and non-majors. Writing intensive.

LIT 4504 Literature as Cultural Study MW (3) AS ENG
The study of literary texts as cultural artifacts and the problematic of that. Literary texts as historical, social, political, psychological, philosophical, religious, etc. documents (or as any one of those). Topics and vary.

LIT 4930 Selected Topics in English Studies (3) AS ENG
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.

LW 2660 Vergil (4) AS CLA
PR: LAT 1121 or equivalent. Readings in Vergil's Aeneid. Study of the tradition, techniques, and artistry of Roman epic poetry. Available to majors and non-majors.

LW 4391 Livy (4) AS CLA
PR: Basic knowledge of Latin. Readings in the ideas and artistry of this Roman historian.

LW 4500 Cicero and Roman Philosophy (4) AS CLA
PR: Basic knowledge of Latin. Readings in the philosophical writings of Cicero, together with a consideration of eclectic thought.

LW 4501 Seneca and Roman Philosophy (4) AS CLA
PR: Basic knowledge of Latin, Readings in the philosophical writings of Lucius Annaeus Seneca, together with an examination of Stoic, Epicurean, and Eclectic thought.

LW 4634 Catullus (4) AS CLA
PR: Basic knowledge of Latin. Readings in Catullus. Study of techniques and tradition in Roman lyric poetry.

LW 4644 Cicero (4) AS CLA
PR: Basic knowledge of Latin. Readings in the epistles of Cicero.

LW 4654 Horace (4) AS CLA
PR: Basic knowledge of Latin. Readings in the Odes and Epodes of Horace; study of the Ode's tradition.

LW 4670 Ovid (4) AS CLA
PR: LAT 1121 or equivalent. Readings in Ovid's Metamorphoses.

Study of Ovid's technique, style, and artistry.

LW 4900 Directed Reading (1-4) AS CLA
Departmental approval required.

LW 4930 Selected Topics (4) AS CLA
Study of an author, movement, or theme.

LW 5900 Directed Reading (1-4) AS CLA
Departmental approval required. S/U.

LW 5954 Selected Topics (1-4) AS CLA
Study of an author, movement, or theme.

MAA 4211 Intermediate Analysis I 6A (4) AS MTH
PR: MAS 4301 Sequences, series, metric spaces, continuity, differentiation.

MAA 4212 Intermediate Analysis II 6A (3) AS MTH
PR: MAA 4211. Riemann-Stieltjes integration, uniform convergence, and related topics.

MAA 4402 Complex Variables 6A (3) AS MTH
PR: MAS 4301 or CW. No credit for students with credit in MAA 5404.

MAA 5014 Topological Spaces 4A (3) AS MTH
PR: MAA 4211 or CW. Topological concepts; Hausdorff spaces; convergence, continuity, and related topics.

MAC 2233 Life Sciences Calculus I 6A QM (4) AS MTH
PR: Three years of high school mathematics including two years of algebra or MGF 1105. No credit for students with credit in MAC 2233, MAC 2281, or MAC 2311. Linear equations and functions, limits, derivatives, integrals, applications.

MAC 2234 Life Sciences Calculus II 6A QM (4) AS MTH
PR: MAA 2233. No credit for students with credit in MAC 2282 or MAC 2312. Techniques of integration, differential equations, functions of several variables, series and Taylor polynomials.

MAC 2281 Engineering Calculus I 6A QM (3) AS MTH
PR: Two years of high school algebra, and a semester of trigonometry or MAC 2147. No credit for students with credit in MAC 2233 or MAC 2311. A year of high school geometry is recommended. Differentiation, limits, differentials, derivatives, indefinite integral.

MAC 2282 Engineering Calculus II 6A QM (3) AS MTH
PR: MAC 2281 or CC. No credit for students with credit in MAC 2234 or MAC 2312. Definite integral, trigonometric functions, log, exponential, series, applications.

MAC 2283 Engineering Calculus III 6A QM (3) AS MTH
PR: MAC 2282 or CC. No credit for students with credit in MAC 2313. Techniques of integration, numerical methods, analytic geometry, polar coordinates, vectors, applications.

MAC 2311 Calculus I 6A QM (4) AS MTH
PR: Two years of high school algebra, and a semester of trigonometry or MAC 2147. No credit for students with credit in MAC 2233 or MAC 2311. A year of high school geometry is recommended. Limits, derivatives, applications.

MAC 2312 Calculus II 6A QM (4) AS MTH
PR: MAC 2311 with a grade of "C" or better. No credit for students with credit in MAC 2234 or MAC 2282. Antiderivatives, the definite integral, applications, series, log, exponential and trig functions.

MAC 2313 Calculus III 6A QM (4) AS MTH
PR: MAC 2312 with a grade of "C" or better. No credit for students with credit in MAC 2283. Integration, polar coordinates, conic sections, vectors, indeterminate forms and proper integrals.

MAD 3100 Discrete Mathematics 6A (3) AS MTH
PR: MAC 2281 or MAC 2311. An introduction to some of the aspects
of discrete mathematics that are fundamental to digital computing. Topics include sets, principles, algorithms, Boolean algebra, computer arithmetic, elementary combinatorics and an introduction to graph theory.

**MAD 4401 Numerical Analysis**
**4 A** (4) AS MTH
PR: MAS 3105; ability to program a digital computer. Interpolation and quadrature, finite differences, numerical solution of algebraic and differential equations, numerical solution of differential equations, computer techniques.

**MAD 4504 Theory of Computation**
**3 AS MTH**

**MAD 5101 LISP: Programming With Algebraic Applications**
**3 AS MTH**
PR: MHP 5308 or MAD 6510 or MAS 5311 or CI. Programming in LISP, functional languages, foundations of Lambda Calculus and algebraic applications (theorem proving and game playing).

**MAD 5305 Graph Theory**
**3 AS MTH**
PR: CI Brief introduction to classical graph theory (4-color theorem, etc.), directed graphs, connected digraphs, condensations, incidence matrices, Poly'a's Theorem, networks.

**MAE 4310 Teaching Elementary School Mathematics I (3) EDE**
PR: Admssion to College of Education and two college level mathematics courses. Methods for teaching number ideas, computation skills, and mathematical reasoning.

**MAE 4320 Teaching Mathematics in the Middle Grades (3) EDE**
PR: 18 semester hours of mathematics or DPR. Admission to Mathematics Education Program. Techniques and materials of instruction in middle grades mathematics topics. Students are expected to observe 20 hours in high schools.

**MAE 4326 Teaching Elementary School Mathematics II (2) EDE**
PR: MAE 4310. Methods for teaching informal geometry, measures, probability and statistics.

**MAE 4330 Teaching Senior High School Mathematics (3) EDE**
PR: MAE 4320 and admission to teacher education program in mathematics. Techniques and materials of instruction in mathematics. Students are expected to observe 30 hours in middle schools.

**MAE 4551 Reading the Language of Mathematics**
**2 EDE**
PR: CI. Reading as a basis for mathematics instruction. Knowledge of terminology and symbolism. Use of dictionaries and other aids to reading.

**MAE 4652 Technology for Teaching Secondary School Mathematics I (3) EDE**
PR: Admission to Mathematics Education Program or DPR. This course covers secondary mathematics education majors to write computer programs in both QBASIC and Logo 4.0 that are appropriate for secondary school mathematics classrooms. A variety of uses of computers in mathematics instruction will also be covered.

**MAE 4653 Technology for Teaching Secondary School Mathematics II (3) EDE**
PR: MAE 4320 and MAE 4652. This course prepares secondary mathematics education majors to be proficient with hand-held technologies such as; calculator based laboratory systems and hand held geometric drawing tools.

**MAE 4909 Directed Study: Mathematics Education**
**1-3 EDE**
PR: Senior Standing. To extend competency in teaching field.

**MAE 4936 Senior Seminar in Mathematics Education**
**2 EDE**

**MAE 4940 Internship: Mathematics Education**
**1-12 EDE**
CR: MAE 4936. S/U only. One full semester of internship in a public or private school. In special programs where the internship experience is distributed over two or more semesters, students will be registered for credit which accumulates from 8 to 12 semester hours.

**MAE 5875 Abstract Algebra for Teachers (3) MTH**
PR: MAS 3105 and MAS 4301 and Bachelor's degree or CI. No credit for Mathematics majors. Groups, fields, vector spaces as they relate to high school algebra and geometry.

**MAE 5877 Mathematical Analysis For Teachers (3) MTH**
PR: MAC 2313 and Bachelor's degree or CI. No credit for Mathematics majors. Limits continuity, derivatives, differentials.

**MAN 3025 Principles of Management**
**3 BA MAN**
Study of the fundamentals of management. It treats topics in organizational theory, organizational behavior, and interpersonal relations which are relevant to effective management performance.

**MAN 3240 Organizational Behavior Analysis**
**3 BA MAN**
PR: MAN 3025. The course covers research literature relevant to organizational functioning including behavioral effects of power and authority, form and organizational structural, variation leadership, motivation, and communication.

**MAN 3301 Human Resource Management**
**3 BA MAN**
To develop a broad set of techniques, and future trends in the management of personal. A study of the major functions in personnel including job analysis, manpower planning, selection, performance evaluation, training, and wage and salary administration.

**MAN 3401 Industrial Relations**
**3 BA MAN**
Conceptualization of the administrative problems arising from unionization. Emphasis on the relationship between management and employee representatives in public and private employment.

**MAN 4120 Managerial Behavioral Laboratory**
**3 BA MAN**
PR: MAN 3240 or equivalent. Development of direct understanding of personal, interpersonal, and intergroup factors present in organizational interaction. Stress is on a series of experiential exercises and written applications of results within a laboratory setting.

**MAN 4129 Theory and Practice of Management Skills**
**3 BA MAN**
This course involves the transference of management theories into practice. It requires the involvement of student in practice problems and practicing the skills needed to be a successful manager.

**MAN 4280 Organizational Development and Change**
**3 BA MAN**
PR: MAN 3240 or CI. A lab course where students experimentally apply behavioral science techniques in an "action-research" framework to the cycle of planned change so as to build a more effective organization.

**MAN 4282 Organizational Assessment**
**3 BA MAN**
PR: MAN 3240. The analysis and measurement of factors which influence organizational effectiveness and the quality of work life. Data based cases will be used by students to assess managerial and supervisory skills and to measure organizational functioning and work design.

**MAN 4402 Employment Laws**
**3 BA MAN**
Federal and state regulation of the employment relationship, including wage and hour laws; EEO; affirmative action programs; employee benefits; insurance; workers compensation; safety, health, employee's personal rights; collective bargaining legislation.

**MAN 4430 Seminar in Negotiations and Administration of Labor Agreements**
**3 BA MAN**
Course studies in contract negotiation, administration, grievance settlement, and arbitration. Assumes familiarity with industrial relations system.

**MAN 4504 Operations Management**
**3 BA QMB**
PR: ISM 3431 or equivalent. Studies the problems of "operations" in all types of enterprises in both the public and private sectors. Emphasis is placed on the application of various decision science methodologies to problem situations.

**MAN 4507 Operation Production Systems**
**3 BA QMB**
PR: MAN 4504 or CI. Study of closed loop production planning and control systems. Master production planning, inventory management, materials requirements planning, capacity, management, production activity, relationship to organizational effectiveness.

**MAN 4600 International Management**
**3 BA MAN**
PR: MAN 3025, Senior Standing or CI. A study of the role and importance of the international/multinational firms in the global environment. Impact of the political, regulatory, and economic dimensions will be considered from the manager's perspective.

**MAN 4802 Entrepreneurship and Small Business Management**
**3 BA MAN**
PR: ACG 2021, ACG 2071, MAR 3023, or CI. Study of the factors involved in starting and managing a small-to-medium-sized business. Emphasis on conduct of pre-business feasibility study, start-up of business, successful management of the firm, and options for succession or termination.

**MAN 4804 Small Business Management Counseling**
**3 BA MAN**
PR: MAN 4802 or CI. Field application in small business settings by (a) analyzing an on-going small business and developing recommendations for making improvements; or (b) conducting a feasibility study for a new enterprise and developing a strategy for implementation if favorable.
MAN 4905 Independent Study (1-3) BA MAN
PR: S/U Only. Specialized independent study determined by the students needs and interests.

MAN 4930 Selected Topics in Management (1-3) BA MAN
PR: CI. Topics to be selected by instructor and department chairperson. The research project will be mutually determined by the student and instructor.

MAP 2302 Differential Equations 6A (3) AS MTH
PR: MAC 2283 or MAC 2313. First order linear and nonlinear differential equations, applications.

MAP 316 Ordinary Differential Equations 1 (3) AS MTH
PR: MAP 2407 or CI. Separation of variables, the heat equation, Laplace's equation, and uniqueness theory. Properties of solutions, linearity, stability. Sturm-Liouville theory.

MAP 3317 Ordinary Differential Equations II (3) AS MTH

MAP 3345 Applied Partial Differential Equations (3) AS MTH
PR: MAP 2302 or CI. Separation of variables, the heat equation, Laplace's equation, classification, Green's functions with emphasis on applications.

MAP 5407 Methods of Applied Mathematics 3 AS MTH
PR: MAP 2302 or CI. Sturm-Liouville theory, Fourier series, Green's functions, mathematical methods for linear systems of ordinary differential equations, and topics from calculus of variations, control theory, numerical solutions of differential equations.

MAR 2931 Selected Topics in Marketing (1-4) BA MKT
PR: CI. Not available for credit to upper-level students who have been admitted to the College of Business. Topics to be selected by department chairman.

MAR 3023 Basic Marketing (3) BA MKT
PR: ACG 2021, ECO 2013, ECO 2023, or CI. Survey of the marketing of goods and services within the economy. Attention is paid to the marketing of other functional areas of business as well as society.

MAR 3400 Professional Selling (3) BA MKT
PR: MAR 3023 or CI. A study of the stages of the professional selling process, and the role of sales in today's marketing environment. Emphasis on learning adaptive selling techniques and developing effective interpersonal communications skills. Sales careers are examined.

MAR 3613 Marketing Research (3) BA MKT
PR: QMB 3200, MAR 3023. A study of research methods and techniques applicable to problem solving in marketing. Attention is also given to defining information needs, determining the value of information, interpreting and reporting information for use in market decision making.

MAR 3823 Marketing Management (3) BA MKT
PR: MAP 3316. Applications oriented study of the marketing function at an intermediate level. Emphasis upon techniques for analysis and problem-solving. Builds upon the principles and concepts learned in MAR 3023, and provides a strong foundation for the remaining courses in the marketing curriculum.

MAR 4156 International Marketing (3) BA MKT
PR: MAR 3023. A study of procedures and problems associated with establishing marketing operations in foreign countries. Includes the institutions, principles and methods involved in the solution of these business problems as well as the effects of national differences on business practices and buyer behavior.

MAR 4213 Logistics and Physical Distribution Management (3) BA MKT
PR: MAR 3023 or CI. A study of logistics in the marketing of goods and services. Includes a description and analysis of the logistics environment as well as components of the physical distribution system with emphasis on information flows and the application of quantitative techniques used in establishing and controlling customer service levels.

MAR 4231 Retailing Management (3) BA MKT
PR: MAR 3023. A comprehensive study of the retailing structure, institutions, and environment. Includes pertinent management theories and practices of analyzing, organizing, planning and controlling retail operations, both large and small.

MAR 4333 Promotion Management (3) BA MKT
PR: MAR 3023 or CI. A study of the role of promotion in the marketing process of the firm, including the planning tools available to the marketing manager and the various types of decisions made in the promotional area. Decision making process in development of a promotional program is emphasized.
MIS 3052 Human Relations Skills in Counseling MW (4) ED EDG

Introduction to the theory of human relations dynamics and development of skills required for effective interpersonal relations. Lecture sessions and experiential training.

MIS 1400C Fundamentals of Leadership Development (1) UG MIS

Reinforce self-confidence through participation in physically and mentally challenging exercises. Develop communication skills.
late organizational ethical values to the effectiveness of a leader. MIS 2601 Military Training Management And Instructional Techniques (1) UG MIS
Learn/apply ethics-based leadership skills that develop individual abilities and contribute to the building of effective teams. Develop skills in oral presentations, writing, planning, coordination of group efforts, fundamentals of ROTC's Leadership Development Program.
MIS 2610 Leadership Assessment (1) UG MIS
Introduction to individual and team aspects of military tactics in small unit operations, radio communications, making safety assessments, movement techniques, planning for team safety/security and methods of pre-execution checks. Learn techniques for training others as an aspect of continued leadership development.
MIS 2610L Leadership Laboratory (0) UG MIS
Required with all classes. Involves leadership responsibilities for the planning, coordination, execution and evaluation of various training and activities. Students develop, practice and refine leadership skills by serving and being evaluated in a variety of responsible positions.
MIS 3302 Small Unit Operations (3) UG MIS
PR: Permission of Department. Series of practical opportunities to lead small groups, receive personal assessments and encouragement, and lead again in situations of increasing complexity. Uses small unit operations and opportunities to plan and conduct training for lower division students both to develop such skills and practicing leading.
MIS 3404 Leadership Fundamentals - Tactics And Camp Preparation (3) UG MIS
PR: Permission of Department. Analyze tasks; prepare written or oral guidance for team members to accomplish tasks. Delegate tasks and supervise. Plan for and adapt to the unexpected organizations under stress. Examine and apply lessons from leadership case studies. Evaluate components of ethical performance.
MIS 4410 Army as a Profession (2) UG MIS
PR: Permission of Department. Designed to prepare cadets for duty as commissioned officers. Instruction centers around proficiency/familiarization with military justice system, military administration, the Officer Professional Management System, international laws of war, and principles of management/leadership.
MIS 4421 Seminar In Military Leadership & Management (3) UG MIS
PR: Permission of Department. Provides a basic understanding of the professional soldier's responsibilities to the Army and the nation. Attempts to improve ethical decision-making skills through an examination of the need for ethical conduct, greater awareness and sensitivity to ethical issues, and the opportunity to apply these abilities in real world case study situations. Included are seminars to acquaint the new lieutenant with his/her relationship to NCOs, company grade officers, and senior officers.
MIS 4500 Advanced Directed Study And Research (1-3) UG MIS
PR: CI and permission of Professor of Military Science. Intensive individual study in a particular aspect of military science that is not covered in regular course offerings. Request for enrollment must be made prior to registration in the form of a written proposal.
MLS 4031 Introduction to Medical Technology (2) AS IAS
PR: Senior standing and acceptance into an approved affiliated hospital. A hospital clinical course on principles and methods of medical technology, including professional ethics, safety regulations, quality control, phlebotomy, medical terminology, laboratory math, and computer applications.
MLS 4032 Clinical Analysis and Body Fluids (2) AS IAS
PR: Senior standing and acceptance into an approved affiliated hospital. A hospital clinical course on laboratory methodology and diagnosis using urine and other fluids such as semen, spinal, pleural, peritoneal, and joint fluids.
MLS 4861 Clinical Immunology (2) AS IAS
PR: Senior standing and acceptance into an approved affiliated hospital. A hospital clinical course on the tissues, cells, and molecules of the human immune system, emphasizing the detection of abnormal response to infection and disease, including blood coagulation and morphological and biochemical aspects of blood cells.
MLS 4862 Clinical Hematology (6) AS IAS
PR: Senior standing and acceptance into an approved affiliated hospital. A hospital clinical course on cellular components of the blood system, laboratory diagnosis and disease, including blood coagulation and morphological and biochemical aspects of blood cells.
MLS 4863 Clinical Microbiology (6) AS IAS
PR: Senior standing and acceptance into an approved affiliated hospital. A hospital clinical course emphasizing pathogens responsible for diseases in man, including morphology, physiology, and laboratory diagnosis of bacteria, fungi, parasites, and viruses.
MUC 2301 Introduction To Electronic Music (3) FA MUS
History and repertoire of electronic music; standard sound studio techniques; basic electronics as applied in electronic sound synthesis; mathematics for music, composition and electronic music.

MUC 3231 Composition (3) FA MUS
PR: Necessary competency at junior level determined by faculty jury. CPR. Private instruction in original composition. Required of composition majors.

MUC 3401 Electronic Music-Analog Synthesis I (3) FA MUS PR: MUC 2301 and CPR. Composition for tape medium with analog synthesizers; use of sound recording studio; repertory or analog music synthesis; technical basis of analog systems design and construction.

MUC 3402 Electronic Music-Analog Synthesis II (3) FA MUS PR: MUC 2301 and CPR. Composition for tape medium with analog synthesizers; use of sound recording studio; repertory or analog music synthesis; technical basis of analog systems design and construction.

MUC 3441 Electronic Music-Digital Synthesis I (3) FA MUS PR: MUC 3401 or MUC 3402 and CPR. Computer assisted composition for conventional instruments; composition for tape medium with computer controlled analog synthesizers; direct digital synthesis; digital systems design and construction.

MUC 3442 Electronic Music-Digital Synthesis II (3) FA MUS PR: MUC 3401 or MUC 3402 and CPR. Computer assisted composition for conventional instruments; composition for tape medium with computer controlled analog synthesizers; direct digital synthesis; digital systems design and construction.

MUC 3501 Contemporary Techniques Of Composition (3) FA MUS PR: CPR. Instruction in the use of major Twentieth-Century compositional techniques; tonal unordered set, and serial composition and the use of indeterminacy in composition and performance.

MUC 4241 Composition (3) FA MUS PR: Necessary competency at senior level determined by faculty jury. CPR. Private instruction in original composition. Required of composition majors, a minimum of six academic hours.

MUC 4403 Electronic Music-Real-Time Performance I (3) FA MUS PR: MUC 3402 and MUC 3442 or equivalent. CPR. Composition for analog/digital equipment, performance applications; sound synthesis, interfacing electronics with conventional instruments.

MUC 4404 Electronic Music-Real-Time Performance II (3) FA MUS PR: MUC 3402 and MUC 3442 or equivalent. CPR. Composition for analog/digital equipment, performance applications; sound synthesis, interfacing electronics with conventional instruments.

MUC 4501 Seminar In New Musical Systems (3) FA MUS PR: CI. CPR. Experimental sound sources and ensemble groupings; creation of new instruments; unfamiliar sonic materials and unique social contexts for music.

MUC 4620 Jazz Composition (3) FA MUS PR: MUC 3354 and/or CPR. Private instruction in original jazz composition. Required of All Jazz Studies Comp. majors, minimum of six hours.

MUC 5625 Jazz Composition (2) FA MUS PR: CI. Required of all composition majors. Private instruction in original composition.

MUE 2090 Theoretical Bases Of Music Education (2) FA MUS PR: CPR. The course is designed to investigate music education practices in the schools. Through the experience and information offered in this course a student will be able to determine his/her commitment to professional music education.

MUE 2450 Beginning Woodwind Techniques (1) FA MUS PR: Sophomore standing, non-woodwind major. CPR. The course introduces the fundamentals of woodwind instrument pedagogy. In addition basic techniques of woodwind performance are taught through the study of clarinet and flute.

MUE 2460 Beginning Brass Techniques (1) FA MUS PR: Sophomore standing, non-brass major. CPR. The course introduces the fundamentals of brass wind instrument pedagogy. In addition, basic techniques of brass performance are taught through the study of trombone and trumpet.

MUE 3421 Choral Materials Practicum (1) FA MUS PR: CPR. A study of choral materials in a laboratory setting appropriate to elementary and secondary school music programs. Course content will change each semester.

MUE 3422 Band Materials Practicum (1) FA MUS PR: CPR. A study of band materials in a laboratory setting appropriate to elementary and secondary school music programs. Course content will change each semester.

MUE 3431 Specialization In Orchestral Techniques (1) FA MUS PR: CPR. A study of orchestra materials, in a laboratory setting, appropriate to elementary and secondary school music programs. Course content will change each semester.

MUE 3451 Advanced Woodwind Techniques (1) FA MUS PR: Sophomore standing, woodwind instrument major or MUE 2450: CPR. The course develops knowledge and skills dealing with advanced principles of teaching and performing on woodwind instruments.

MUE 3461 Advanced Brass Techniques (1) FA MUS PR: Sophomore standing, brass instrument major or MUE 2460. CPR. The course develops knowledge and skills dealing with advanced techniques for teaching music in the use of brass instruments.

MUE 4210 Music For The Child (3) FA MUS PR: Admission to the College of Education. CPR. Music fundamentals, the development of music skills and knowledge of music materials and teaching strategies for presenting music to children in the elementary school.

MUE 4311 Music In The Elementary School (3) FA MUS PR: CPR. A study of principles, techniques, materials, and activities as they relate to a comprehensive music curriculum in Grades K-6.

MUE 4321 Foundations Of Choral Music (2) FA MUS PR: Major status or CPR. This course deals with the development of knowledge and skills needed to effectively organize and teach a choral music program for elementary and intermediate grade level students. Include school observation and participation component.

MUE 4330 Classroom Music In The Secondary School (3) FA MUS PR: CPR. Development and implementation of methods and techniques for teaching music to the student not participating in secondary school music performing groups.


MUE 4352 Foundations Of Instrumental Music (2) FA MUS PR: CPR. MUE 2450, MUE 2460, MVP 1211. Junior standing. Introduction to the foundation of instrumental music instruction in the elementary and middle school.

MUE 4480 Marching Band Techniques (2) FA MUS PR: Junior standing. CPR. The course is required of instrumental music education majors. It will provide the student with the needed skills in creating for and teaching the public school marching band.

MUE 4909 Directed Study: Music Education (1-3) FA MUS PR: Senior standing. CPR. To extend competency in teaching field. Offered only as a supervised class.

MUE 4936 Senior Seminar In Music (2) FA MUS CR: MUE 4940. CPR. Synthesis of teacher candidate's courses in complete college program. Required concurrently with internship.

MUE 4940 Internship In Music Education (1-12) FA MUS CR: MUE 4936. S/U only. CPR. One full semester of internship in a public or private school. In special programs where the intern experience is distributed over two or more semesters, students will be registered for credit which accumulates from 9-12 semester hours.

MUG 3104 Basic Conducting (2) FA MUS PR: CPR. The study and practical application of basic conducting techniques. Development of skills related to the conducting of concert band.

MUG 4302 Instrumental Conducting (2) FA MUS PR: MUG 3404 and DPR. A study of those techniques of conducting unique to instrumental music ensembles: baton technique, score reading, terminology, and instrumentation.

MUT 2019 History Of Popular Music (2) FA MUS Popular music in the U.S. from 1820 to present. Units on the big band
era, country and western, jazz, Black music, and the rock scene beginning in 1955. May be used for University General Distribution Requirements and may be used to satisfy part of the 6 hours in College Requirement for Fine Arts majors in Art, Dance, Theatre and as a music elective.

**MUH 2051 Folk And Traditional Music Of World Cultures FA AF (3) FA MUS**
A comparative survey of the stylistic traits and functions of the folk and traditional music, both sacred and secular, of diverse Western and non-Western cultures. For non-majors, may be taken by majors as an elective with departmental approval.

**MUH 2632 Music In The United States FA (3) FA MUS**
Designed for majors and non-majors, this course will use live performances and recordings to introduce music as practiced in America from Colonial to present times. Included in the course will be study of the contributions of various ethnic/minority groups, and discussions of the relevant social issues connected with these contributions.

**MUH 3016 Survey Of Jazz FA (3) FA MUS**
For non-music majors. Not repeatable. A study of the evolution of America’s “classical” music: Jazz. In addition to presenting an overview of the most prominent artists and literature, the course will focus on the cultural dynamics involved in the development of jazz from 1890 to the present.

**MUH 3300 Music History/Medieval And Renaissance (2) FA MUS**
PR: DPR. Required of music majors; a study of the historical development of musical styles of the Medieval and Renaissance periods and of the music of those periods.

**MUH 3301 Music History/Baroque And Classic MW (3) FA MUS**
PR: MUL 2111 or DPR. Required of music majors; open to non-majors with CPR. A study of the historical development of musical styles of the Baroque and Classic periods and of the music of those periods.

**MUH 3302 Music History/Romantic And 20th Century MW (3) FA MUS**
PR: MUL 2111 or CPR. Required of music majors; open to non-majors with CPR. A study of the historical development of musical styles of the Romantic and Twentieth Century eras and of the music of those periods.

**MUH 4058 Intercultural Music In The Twentieth Century MW (3) FA MUS**
PR: MUN 2051 or MUL 2111 or CPR. An in-depth investigation of composers born after c. 1880, from all parts of the world, who have attempted to integrate elements from two or more cultures into their composition.

**MUH 4801 History Of Jazz (3) FA MUS**
PR: MUT 1112 or CPR. An in-depth study of the historical development of Jazz, including the representative musical literature and sociological implications.

**MUL 2011 The Enjoyment Of Music FA (3) FA MUS**
Open only to non-music majors. A study in the art of music and its materials, designed to develop an understanding of basic principles of music and a technique for listening to music.

**MUL 2111 Introduction To Music Literature 6A HP FA (3) FA MUS**
PR: MUT 1112 or CPR. A survey of representative music exemplars of the past and present with emphasis on the study of styles and form. Required for music majors.

**MUL 3001 Issues In Music FA AF (2-3) FA MUS**
Open only to non-music majors. Lectures and live performances by artist faculty of significant works from the literature for the piano; analysis and illustration in performance of the abstract and aesthetic elements in music which vitally concern the artist-performer.

**MUL 3012 Music In Your Life FA (3) FA MUS**
Open only to non-music majors. A study in the art of music and its materials, designed to develop an understanding of basic principles of music and a technique for listening to music.

**MUN 1110 University Marching Band (1-3) FA MUS**
This course provides performance experiences with the Marching Band. The course is open to all major area.

**MUN 3143 Wind Ensemble (1) FA MUS**
PR: DPR. Open to all university students with the necessary proficiency in their performing media; study and performance of music for large combinations of voices, string, woodwind, brass, or percussion instruments.

**MUN 3213 University Orchestra (1) FA MUS**
PR: DPR. Open to all university students with the necessary proficiency in their performing media; study and performance of music for large combinations of voices, string, woodwind, brass, or percussion instruments.

**MUN 3313 University Singers (1) FA MUS**
PR: DPR. Open to all university students with the necessary proficiency in their performing media; study and performance of music for large combinations of voices, string, woodwind, brass, or percussion instruments.

**MUN 3343 Chamber Singers (1) FA MUS**
PR: DPR. Open to all university students with the necessary proficiency in their performing media; study and performance of music for large combinations of voices, string, woodwind, brass, or percussion instruments, and piano.

**MUN 3383 University-Community Chorus (1) FA MUS**
PR: DPR. Open to all university students with the necessary proficiency in their performing media; study and performance of music for large combinations of voices, string, woodwind, brass, or percussion instruments, and piano.

**MUN 3411 String Quartet (1) FA MUS**
PR: DPR. Open to all university students with the necessary proficiency in their performing media; study and performance of music for small combinations of voices, string, woodwind, brass, or percussion instruments, and piano.

**MUN 3420 Saxophone Ensemble (1) FA MUS**
PR: DPR. Open to all university students with the necessary proficiency in their performing media; study and performance of music for small combinations of voices, string, woodwind, brass, or percussion instruments, and piano.

**MUN 3421 Flute Choir (1) FA MUS**
PR: DPR. Open to all university students with the necessary proficiency in their performing media; study and performance of music for small combinations of voices, string, woodwind, brass, or percussion instruments, and piano.

**MUN 3422 Woodwind Quintet (1) FA MUS**
PR: DPR. Open to all university students with the necessary proficiency in their performing media; study and performance of music for small combinations of voices, string, woodwind, brass, or percussion instruments, and piano.

**MUN 3424 Horn Ensemble (1) FA MUS**
PR: DPR. Open to all university students with the necessary proficiency in their performing media; study and performance of music for small combinations of voices, string, woodwind, brass, or percussion instruments, and piano.

**MUN 3433 Brass Choir (1) FA MUS**
PR: DPR. Open to all university students with the necessary proficiency in their performing media; study and performance of music for small combinations of voices, string, woodwind, brass, or percussion instruments, and piano.

**MUN 3434 Percussion Ensemble (1) FA MUS**
PR: DPR. Open to all university students with the necessary proficiency in their performing media; study and performance of music for small combinations of voices, string, woodwind, brass, or percussion instruments, and piano.

**MUN 3444 Marimba Ensemble (1) FA MUS**
PR: DPR. Open to all university students with the necessary proficiency in their performing media; study and performance of music for small combinations of voices, string, woodwind, brass, or percussion instruments, and piano.

**MUN 3453 Piano Ensemble (1) FA MUS**
PR: DPR. Open to all university students with the necessary proficiency in their performing media; study and performance of music for small combinations of voices, string, woodwind, brass, or percussion instruments, and piano.

**MUN 3473 Collegium Musicum (1) FA MUS**
PR: DPR. Open to all university students with the necessary proficiency in their performing media; study and performance of music for small combinations of voices, string, woodwind, brass, or percussion instruments, and piano.

**MUN 3483 Classical Guitar Ensemble (1) FA MUS**
PR: DPR. Open to all university students with the necessary proficiency in their performing media; study and performance of music for small combinations of voices, string, woodwind, brass, or percussion instruments, and piano.

**MUN 3713 Jazz Ensemble (1) FA MUS**
PR: DPR. Open to all university students with the necessary proficiency in their performing media; study and performance of music for small combinations of voices, string, woodwind, brass, or percussion instruments, and piano.

**MUN 3714 Jazz Chamber Ensemble (1) FA MUS**
PR: DPR. Open to all university students with the necessary proficiency in their performing media; study and performance of music for small combinations of voices, string, woodwind, brass, or percussion instruments, and piano.
MUS 4930 Selected Topics in Music (1-4) MUS
PR: CPR. Course is designed to develop arranging and/or
compositional skills in the jazz idiom through the study of jazz
orchestration, harmonic, and melodic practices.

MUT 3354 Jazz Composition And Arranging II (3) MUT
PR: MUS 1112 and CPR. Course designed to develop arranging and/
or compositional skills in the jazz idiom through the study of jazz
orchestration, harmonic, and melodic practices.

MUT 3363 Advanced Jazz Improvisation I (2) MUT
PR: CPR. A studio course study of the improvised solos of
the major innovators in jazz. Oriented to the continuing
development of students' soloing ability. Students are required to
enroll in Jazz Chamber Ensemble as a lab. Open to majors and non-
majors.

MUT 3664 Advanced Jazz Improvisation II (2) MUT
PR: MUS 3663 A continuation of Jazz Styles and Analysis I with
the emphasis on contemporary jazz artists. Students are required to
enroll in Jazz Chamber Ensemble as a lab. Open to majors and non-
majors.

MUS 4930 Selected Topics in Music (1-4) MUS
PR: CPR. Course is designed to develop arranging and/or
compositional skills in the jazz idiom through the study of jazz
orchestration, harmonic, and melodic practices.

MUT 3354 Jazz Composition And Arranging II (3) MUT
PR: MUS 1112 and CPR. Course designed to develop arranging and/
or compositional skills in the jazz idiom through the study of jazz
orchestration, harmonic, and melodic practices.

MUT 3363 Advanced Jazz Improvisation I (2) MUT
PR: CPR. A studio course study of the improvised solos of
the major innovators in jazz. Oriented to the continuing
development of students' soloing ability. Students are required to
enroll in Jazz Chamber Ensemble as a lab. Open to majors and non-
majors.

MUT 3664 Advanced Jazz Improvisation II (2) MUT
PR: MUS 3663 A continuation of Jazz Styles and Analysis I with
the emphasis on contemporary jazz artists. Students are required to
enroll in Jazz Chamber Ensemble as a lab. Open to majors and non-
majors.

MUS 4930 Selected Topics in Music (1-4) MUS
PR: CPR. Course is designed to develop arranging and/or
compositional skills in the jazz idiom through the study of jazz
orchestration, harmonic, and melodic practices.

MUT 3354 Jazz Composition And Arranging II (3) MUT
PR: MUS 1112 and CPR. Course designed to develop arranging and/
or compositional skills in the jazz idiom through the study of jazz
orchestration, harmonic, and melodic practices.

MUT 3363 Advanced Jazz Improvisation I (2) MUT
PR: CPR. A studio course study of the improvised solos of
the major innovators in jazz. Oriented to the continuing
development of students' soloing ability. Students are required to
enroll in Jazz Chamber Ensemble as a lab. Open to majors and non-
majors.

MUT 3664 Advanced Jazz Improvisation II (2) MUT
PR: MUS 3663 A continuation of Jazz Styles and Analysis I with
the emphasis on contemporary jazz artists. Students are required to
enroll in Jazz Chamber Ensemble as a lab. Open to majors and non-
majors.
MVB 1312 French Horn Principal (2) FA MUS
PR: CPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVB 1313 Trombone Principal (2) FA MUS
PR: CPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVB 1314 Euphonium Principal (2) FA MUS
PR: CPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVB 1315 Tuba Principal (2) FA MUS
PR: CPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVB 1411 Trumpet Major (3) FA MUS
PR: CPR. Required of all applied music majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVB 1412 French Horn Major (3) FA MUS
PR: CPR. Required of all applied music majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVB 1413 Trombone Major (3) FA MUS
PR: CPR. Required of all applied music majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVB 1414 Euphonium Major (3) FA MUS
PR: CPR. Required of all applied music majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVB 1415 Tuba Major (3) FA MUS
PR: CPR. Required of all applied music majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVB 2321 Trumpet Principal (2) FA MUS
PR: CPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVB 2322 French Horn Principal (2) FA MUS
PR: CPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVB 2323 Trombone Principal (2) FA MUS
PR: CPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVB 2324 Euphonium Principal (2) FA MUS
PR: CPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVB 2325 Tuba Principal (2) FA MUS
PR: CPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVB 2421 Trumpet Major (3) FA MUS
PR: CPR. Necessary competency at Sophomore level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MVB 2422 French Horn Major (3) FA MUS
PR: CPR. Necessary competency at Sophomore level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MVB 2423 Trombone Major (3) FA MUS
PR: CPR. Necessary competency at Sophomore level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MVB 2424 Euphonium Major (3) FA MUS
PR: CPR. Necessary competency at Sophomore level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MVB 2425 Tuba Major (3) FA MUS
PR: CPR. Necessary competency at Sophomore level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MVB 3331 Trumpet Principal (2) FA MUS
PR: CPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVB 3332 French Horn Principal (2) FA MUS
PR: CPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVB 3333 Trombone Principal (2) FA MUS
PR: CPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVB 3334 Euphonium Principal (2) FA MUS
PR: CPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVB 3335 Tuba Principal (2) FA MUS
PR: CPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVB 3431 Trumpet Major (3) FA MUS
PR: CPR. Necessary competency at junior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MVB 3432 French Horn Major (3) FA MUS
PR: CPR. Necessary competency at junior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MVB 3433 Trombone Major (3) FA MUS
PR: CPR. Necessary competency at junior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MVB 3434 Euphonium Major (3) FA MUS
PR: CPR. Necessary competency at junior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MVB 3435 Tuba Major (3) FA MUS
PR: CPR. Necessary competency at junior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MVB 4341 Trumpet Principal (2) FA MUS
PR: CPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVB 4342 French Horn Principal (2) FA MUS
PR: CPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVB 4343 Trombone Principal (2) FA MUS
PR: CPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVB 4344 Euphonium Principal (2) FA MUS
PR: CPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVB 4345 Tuba Principal (2) FA MUS
PR: CPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVB 4346 Trumpet Major (3) FA MUS
PR: CPR. Necessary competency at senior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.
### MV 1210 Applied Jazz Piano (1) FA MUS
PR: CPR. Course is open by audition only. One half-hour private lesson or one hour class per week for music students wishing to gain proficiency in an area other than their applied performance major and for a limited number of nonmusic majors who have had prior musical training.

### MV 1211 Applied Jazz Guitar (1) FA MUS
PR: CPR. Course is open by audition only. One half-hour private lesson or one hour class per week for music students wishing to gain proficiency in an area other than their applied performance major and for a limited number of nonmusic majors who have had prior musical training.

### MV 1214 Applied Jazz Bass (1) FA MUS
PR: CPR. Course is open by audition only. One half-hour private lesson or one hour class per week for music students wishing to gain proficiency in an area other than their applied performance major and for a limited number of nonmusic majors who have had prior musical training.

### MV 1219 Jazz Percussion (1) FA MUS
PR: CPR. Course is open by audition only. One half-hour private lesson or one hour class per week for music students wishing to gain proficiency in an area other than their applied performance major and for a limited number of nonmusic majors who have had prior musical training.

### MV 1310 Applied Jazz Piano Principal (2) FA MUS
PR: CPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

### MV 1313 Jazz Guitar Principal (2) FA MUS
PR: CPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

### MV 1314 Jazz Bass Principal (2) FA MUS
PR: CPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

### MV 1319 Applied Jazz Percussion Principal (2) FA MUS
PR: CPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

Applied music courses are NOT available on S/U basis. Private and class instruction.

### MVJ 1410 Applied Jazz Piano Major (3) FA MUS
PR: CPR. Required of all applied music majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

### MVJ 1413 Jazz Guitar Major (3) FA MUS
PR: CPR. Required of all applied music majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

### MVJ 1414 Jazz Bass Major (3) FA MUS
PR: CPR. Required of all applied music majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

### MVJ 2320 Applied Jazz Piano Principal (2) FA MUS
PR: CPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

### MVJ 2323 Jazz Guitar Principal (2) FA MUS
PR: CPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

### MVJ 2324 Jazz Bass Principal (2) FA MUS
PR: CPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

### MVJ 2329 Applied Jazz Percussion Principal (2) FA MUS
PR: CPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

### MVJ 2420 Applied Jazz Piano Major (3) FA MUS
PR: CPR. Necessary competency at Sophomore level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

### MVJ 2423 Jazz Guitar Major (3) FA MUS
PR: CPR. Necessary competency at Sophomore level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

### MVJ 2424 Jazz Bass Major (3) FA MUS
PR: CPR. Necessary competency at Sophomore level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

### MVJ 3330 Applied Jazz Piano Principal (2) FA MUS
PR: CPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

### MVJ 3333 Jazz Guitar Principal (2) FA MUS
PR: CPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

### MVJ 3334 Jazz Bass Principal (2) FA MUS
PR: CPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

### MVJ 3339 Applied Jazz Percussion Principal (2) FA MUS
PR: CPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

### MVJ 3431 Applied Jazz Piano Major (3) FA MUS
PR: CPR. Necessary competency at junior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

### MVJ 3433 Jazz Guitar Major (3) FA MUS
PR: CPR. Necessary competency at junior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

### MVJ 3434 Jazz Bass Major (3) FA MUS
PR: CPR. Necessary competency at junior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

### MVJ 3439 Applied Jazz Percussion (3) FA MUS
PR: CPR. Necessary competency at junior level determined by
MVK 1313 Organ Principal (2) FA MUS
PR: CPR. Required of all music education and composition majors.
Open to a limited number of non-music majors by audition only.
Applied music courses are NOT available on S/U basis. Private and class instruction.

MVK 1411 Piano Major (3) FA MUS
PR: CPR. Required of all applied music majors. Open to a limited number of non-music majors by audition only. 
Applied music courses are NOT available on S/U basis. Private and class instruction.

MVK 1413 Organ Major (3) FA MUS
PR: CPR. Required of all applied music majors. Open to a limited number of non-music majors by audition only. 
Applied music courses are NOT available on S/U basis. Private and class instruction.

MVK 1811 Beginning Piano I (2) FA MUS
Class is elementary piano and music fundamentals designed for students with limited keyboard experience. Primary emphasis is placed on sight-reading, accompanying, transposition, harmonization, basic technique, and appropriate literature.

MVK 1821 Beginning Piano II (2) FA MUS
PR: CPR. Class is elementary piano and music fundamentals designed for students with limited keyboard experience. Primary emphasis is placed on sight-reading, accompanying, transposition, harmonization, basic technique, and appropriate literature.

MVK 2111 Keyboard Skills III (2) FA MUS
PR: CPR. Class is elementary piano and music fundamentals designed for students with limited keyboard experience. Primary emphasis is placed on sight-reading, accompanying, transposition, harmonization, basic technique, and appropriate literature.

MVK 2271 Piano Principal I (3) FA MUS
PR: CPR. Required of all music education and composition majors.
Open to a limited number of non-music majors by audition only. 
Applied music courses are NOT available on S/U basis. Private and class instruction.

MVK 2323 Organ Principal (2) FA MUS
PR: CPR. Required of all music education and composition majors.
Open to a limited number of non-music majors by audition only. 
Applied music courses are NOT available on S/U basis. Private and class instruction.

MVK 2421 Piano Major (3) FA MUS
PR: CPR. Necessary competency at Sophomore level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MVK 2423 Organ Major (3) FA MUS
PR: CPR. Necessary competency at Sophomore level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MVK 2821 Intermediate Piano (2) FA MUS
PR: CPR. Class is elementary piano and music fundamentals designed for students with limited keyboard experience. Primary emphasis is placed on sight-reading, accompanying, transposition, harmonization, basic technique, and appropriate literature.

MVK 3111 Music Majors, Level V (2) FA MUS
PR: CPR. Class is elementary piano and music fundamentals designed for students with limited keyboard experience. Primary emphasis is placed on sight-reading, accompanying, transposition, harmonization, basic technique, and appropriate literature.

MVK 3331 Piano Principal (2) FA MUS
PR: CPR. Required of all music education and composition majors.
Open to a limited number of non-music majors by audition only. 
Applied music courses are NOT available on S/U basis. Private and class instruction.

MVK 3333 Centenary Organ Principal (2) FA MUS
PR: CPR. Required of all music education and composition majors.
Open to a limited number of non-music majors by audition only. 
Applied music courses are NOT available on S/U basis. Private and class instruction.

MVK 3431 Piano Major (3) FA MUS
PR: CPR. Necessary competency at junior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MVK 3433 Organ Major (3) FA MUS
PR: CPR. Necessary competency at junior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MVK 3431 Piano Principal (2) FA MUS
PR: CPR. Required of all music education and composition majors.
Open to a limited number of non-music majors by audition only. 
Applied music courses are NOT available on S/U basis. Private and class instruction.
MVP 4343 Organ Principal (2) FA MUS
PR: CPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVP 4441 Piano Major (3) FA MUS
PR: CPR. Necessary competency at senior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MVP 4443 Organ Major (3) FA MUS
PR: CPR. Necessary competency at senior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MVP 4640 Piano Pedagogy I (4) FA MUS
PR: CPR. May be elected by undergraduate music majors; emphasis on the business management of the music studio, and the musical responsibilities of the studio teacher, the techniques of private instruction.

MVP 4641 Piano Pedagogy II (4) FA MUS
PR: CPR. May be elected by undergraduate music majors; emphasis on the business management of the music studio, and the musical responsibilities of the studio teacher, the techniques of private instruction.

MVP 5251 Applied Piano (2) FA MUS
PR: DPR. Open to senior and advanced undergraduate students who have completed recital requirements, special non-degree seeking students, and students who have a secondary music requirement. Private and class instruction.

MVP 5253 Applied Organ (2) FA MUS
PR: DPR. Open to senior and advanced undergraduate students who have completed recital requirements, special non-degree seeking students, and students who have a secondary music requirement. Private and class instruction.

MVP 1211 Applied Percussion (1) FA MUS
PR: CPR. Course is open by audition only. One half-hour private lesson or one hour class per week for music students wishing to gain proficiency in an area other than their applied performance major and for a limited number of nonmusic majors who have had prior musical training.

MVP 1311 Percussion Principal (2) FA MUS
PR: CPR. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVP 1411 Percussion Major (3) FA MUS
PR: CPR. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVP 2321 Percussion Principal (2) FA MUS
PR: CPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVP 2421 Percussion Major (3) FA MUS
PR: CPR. Necessary competency at Sophomore level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MVP 3331 Percussion Principal (2) FA MUS
PR: CPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVP 3431 Percussion Major (3) FA MUS
PR: CPR. Necessary competency at Junior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MVP 4341 Percussion Principal (2) FA MUS
PR: CPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVP 4441 Percussion Major (3) FA MUS
PR: CPR. Necessary competency at Junior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MVP 5251 Applied Percussion, Secondary (2) FA MUS
PR: DPR. Necessary competency determined by faculty jury audition. Required registration in major performance ensemble. Required of all applied music majors. Private and class instruction.

MVS 1211 Applied Violin (1) FA MUS
PR: CPR. Course is open by audition only. One half-hour private lesson or one hour class per week for music students wishing to gain proficiency in an area other than their applied performance major and for a limited number of nonmusic majors who have had prior musical training.

MVS 1212 Applied Viola (1) FA MUS
PR: CPR. Course is open by audition only. One half-hour private lesson or one hour class per week for music students wishing to gain proficiency in an area other than their applied performance major and for a limited number of nonmusic majors who have had prior musical training.

MVS 1213 Applied Violoncello (1) FA MUS
PR: CPR. Course is open by audition only. One half-hour private lesson or one hour class per week for music students wishing to gain proficiency in an area other than their applied performance major and for a limited number of nonmusic majors who have had prior musical training.

MVS 1214 Applied Double Bass (1) FA MUS
PR: CPR. Course is open by audition only. One half-hour private lesson or one hour class per week for music students wishing to gain proficiency in an area other than their applied performance major and for a limited number of nonmusic majors who have had prior musical training.

MVS 1215 Applied Harp (1) FA MUS
PR: CPR. Course is open by audition only. One half-hour private lesson or one hour class per week for music students wishing to gain proficiency in an area other than their applied performance major and for a limited number of nonmusic majors who have had prior musical training.

MVS 1311 Violin Principal (2) FA MUS
PR: CPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVS 1312 Viola Principal (2) FA MUS
PR: CPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVS 1313 Violoncello Principal (2) FA MUS
PR: CPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVS 1314 Double Bass Principal (2) FA MUS
PR: CPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVS 1315 Harp Principal (2) FA MUS
PR: CPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVS 1316 Classical Guitar Principal (2) FA MUS
PR: CPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVS 1411 Violin Major (3) FA MUS
PR: CPR. Required of all applied music majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVS 1412 Viola Major (3) FA MUS
PR: CPR. Required of all applied music majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVS 1413 Cello Major (3) FA MUS
PR: CPR. Required of all applied music majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVS 1414 Double Bass Major (3) FA MUS
PR: CPR. Required of all applied music majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.
number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

**MVS 1415 Harp Major (3) FA MUS**
PR: CPR. Required of all applied music majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

**MVS 1416 Classical Guitar Major (3) FA MUS**
PR: CPR. Required of all applied music majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

**MVS 2321 Violin Principal (2) FA MUS**
PR: CPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

**MVS 2322 Viola Principal (2) FA MUS**
PR: CPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

**MVS 2323 Violoncello Principal (2) FA MUS**
PR: CPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

**MVS 2324 Double Bass Principal (2) FA MUS**
PR: CPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

**MVS 2325 Harp Principal (2) FA MUS**
PR: CPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

**MVS 2326 Classical Guitar Principal (2) FA MUS**
PR: CPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

**MVS 2421 Viola Major (3) FA MUS**
PR: CPR. Necessary competency at Sophomore level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

**MVS 2422 Viola Principal (3) FA MUS**
PR: CPR. Necessary competency at Sophomore level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

**MVS 2423 Cello Major (5) FA MUS**
PR: CPR. Necessary competency at Sophomore level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

**MVS 2424 Double Bass Major (3) FA MUS**
PR: CPR. Necessary competency at Sophomore level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

**MVS 2425 Harp Principal (2) FA MUS**
PR: CPR. Necessary competency at Sophomore level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

**MVS 2426 Classical Guitar Major (3) FA MUS**
PR: CPR. Necessary competency at Sophomore level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

**MVS 3331 Violin Principal (2) FA MUS**
PR: CPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

**MVS 3332 Viola Principal (2) FA MUS**
PR: CPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

**MVS 3333 Violoncello Principal (2) FA MUS**
PR: CPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

**MVS 3334 Double Bass Principal (2) FA MUS**
PR: CPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

**MVS 3335 Harp Principal (2) FA MUS**
PR: CPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

**MVS 3431 Violin Major (3) FA MUS**
PR: CPR. Necessary competency at junior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

**MVS 3432 Viola Major (3) FA MUS**
PR: CPR. Necessary competency at junior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

**MVS 3433 Classical Guitar Major (3) FA MUS**
PR: CPR. Necessary competency at junior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

**MVS 3434 Double Bass Major (3) FA MUS**
PR: CPR. Necessary competency at junior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

**MVS 3435 Harp Major (3) FA MUS**
PR: CPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

**MVS 3436 Classical Guitar Major (3) FA MUS**
PR: CPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

**MVS 3441 Violin Principal (2) FA MUS**
PR: CPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

**MVS 3442 Viola Major (3) FA MUS**
PR: CPR. Necessary competency at junior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

**MVS 3443 Cello Major (5) FA MUS**
PR: CPR. Necessary competency at junior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

**MVS 3444 Double Bass Major (3) FA MUS**
PR: CPR. Necessary competency at junior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

**MVS 3445 Harp Major (3) FA MUS**
PR: CPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

**MVS 3446 Classical Guitar Major (3) FA MUS**
PR: CPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

**MVS 3447 Violin Major (3) FA MUS**
PR: CPR. Necessary competency at junior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

**MVS 3448 Double Bass Major (3) FA MUS**
PR: CPR. Necessary competency at junior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.
MVS 4445 Harp Major (3) FA MUS
PR: CPR. Necessary competency at junior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MVS 4446 Classical Guitar Major (3) FA MUS
PR: CPR. Necessary competency at junior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MVS 5251 Applied Violin (2) FA MUS
PR: DPR. Open to senior and advanced undergraduate students who have completed recital requirements, special non-degree seeking students, and students who have a secondary applied music requirement. Private and class instruction.

MVS 5252 Applied Viola (2) FA MUS
PR: DPR. Open to senior and advanced undergraduate students who have completed recital requirements, special non-degree seeking students, and students who have a secondary applied music requirement. Private and class instruction.

MVS 5253 Applied Cello (2) FA MUS
PR: DPR. Open to senior and advanced undergraduate students who have completed recital requirements, special non-degree seeking students, and students who have a secondary applied music requirement. Private and class instruction.

MVS 5254 Applied Double Bass (2) FA MUS
PR: DPR. Open to senior and advanced undergraduate students who have completed recital requirements, special non-degree seeking students, and students who have a secondary applied music requirement. Private and class instruction.

MVS 5255 Applied Harp (2) FA MUS
PR: DPR. Open to senior and advanced undergraduate students who have completed recital requirements, special non-degree seeking students, and students who have a secondary applied music requirement. Private and class instruction.

MVS 5256 Applied Classical Guitar (2) FA MUS
PR: DPR. Open to senior and advanced undergraduate students who have completed recital requirements, special non-degree seeking students, and students who have a secondary applied music requirement. Private and class instruction.

MVS 1211 Applied Voice (1) FA MUS
One half-hour private lesson or one hour class per week for music students wishing to gain proficiency in an area other than their applied performance major and for a limited number of nonmusic majors who have had prior musical training.

MVS 1311 Voice Principle (2) FA MUS
PR: CPR. Required of all music education and composition majors. Open to limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVS 1411 Voice Major (3) FA MUS
PR: CPR. Required of all applied music majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVS 2321 Voice Principal (2) FA MUS
PR: CPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVS 2421 Voice Major (3) FA MUS
PR: CPR. Necessary competency at Sophomore level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MVS 3331 Voice Principle (2) FA MUS
PR: CPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVS 3431 Voice Major (3) FA MUS
PR: CPR. Necessary competency at junior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MVS 4341 Voice Principal (2) FA MUS
PR: CPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVS 4441 Voice Major (3) FA MUS
PR: CPR. Necessary competency at senior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MVS 5251 Applied Voice (2) FA MUS
PR: CPR. Open to senior and advanced undergraduate students who have completed recital requirements, special non-degree seeking students, and students who have a secondary applied music requirement. Private and class instruction.

MVS 1211 Applied Flute (1) FA MUS
PR: CPR. Course is open by audition only. One half-hour private lesson or one hour class per week for music students wishing to gain proficiency in an area other than their applied performance major and for a limited number of nonmusic majors who have had prior musical training.

MVS 1212 Applied Oboe (1) FA MUS
PR: CPR. Course is open by audition only. One half-hour private lesson or one hour class per week for music students wishing to gain proficiency in an area other than their applied performance major and for a limited number of nonmusic majors who have had prior musical training.

MVS 1213 Applied Clarinet (1) FA MUS
PR: CPR. Course is open by audition only. One half-hour private lesson or one hour class per week for music students wishing to gain proficiency in an area other than their applied performance major and for a limited number of nonmusic majors who have had prior musical training.

MVS 1214 Applied Bassoon (1) FA MUS
PR: CPR. Course is open by audition only. One half-hour private lesson or one hour class per week for music students wishing to gain proficiency in an area other than their applied performance major and for a limited number of nonmusic majors who have had prior musical training.

MVS 1215 Applied Saxophone (1) FA MUS
PR: CPR. Course is open by audition only. One half-hour private lesson or one hour class per week for music students wishing to gain proficiency in an area other than their applied performance major and for a limited number of nonmusic majors who have had prior musical training.

MVS 1311 Flute Principal (2) FA MUS
PR: CPR. Required of all applied music majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVS 1312 Oboe Principal (2) FA MUS
PR: CPR. Required of all applied music majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVS 1313 Clarinet Principal (2) FA MUS
PR: CPR. Required of all applied music majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVS 1314 Bassoon Principal (2) FA MUS
PR: CPR. Required of all applied music majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVS 1315 Saxophone Principal (2) FA MUS
PR: CPR. Required of all applied music majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVS 1411 Flute Major (3) FA MUS
PR: CPR. Required of all applied music majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVS 1412 Oboe Major (3) FA MUS
PR: CPR. Required of all applied music majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVS 1413 Clarinet Major (3) FA MUS
PR: CPR. Required of all applied music majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVS 1414 Bassoon Major (3) FA MUS
PR: CPR. Required of all applied music majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVS 1415 Saxophone Major (3) FA MUS
PR: CPR. Required of all applied music majors. Open to a limited number of non-music majors by audition only. Applied music
courses are NOT available on S/U basis. Private and class instruction.

MVW 2321 Flute Principal (2) FA MUS
PR: CPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVW 2322 Oboe Principal (2) FA MUS
PR: CPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVW 2323 Clarinet Principal (2) FA MUS
PR: CPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVW 2324 Bassoon Principal (2) FA MUS
PR: CPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVW 2325 Saxophone Principal (2) FA MUS
PR: CPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVW 2421 Flute Major (3) FA MUS
PR: CPR. Necessary competency at Sophomore level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MVW 2422 Oboe Major (3) FA MUS
PR: CPR. Necessary competency at Sophomore level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MVW 2423 Clarinet Major (3) FA MUS
PR: CPR. Necessary competency at Sophomore level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MVW 2424 Bassoon Major (3) FA MUS
PR: CPR. Necessary competency at Sophomore level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MVW 2425 Saxophone Major (3) FA MUS
PR: CPR. Necessary competency at Sophomore level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MVW 3333 Clarinet Principal (2) FA MUS
PR: CPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVW 3334 Bassoon Principal (2) FA MUS
PR: CPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVW 3335 Saxophone Principal (2) FA MUS
PR: CPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVW 3451 Flute Major (3) FA MUS
PR: CPR. Necessary competency at junior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MVW 3452 Oboe Major (3) FA MUS
PR: CPR. Necessary competency at junior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MVW 3453 Clarinet Major (3) FA MUS
PR: CPR. Necessary competency at junior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MVW 3434 Bassoon Major (3) FA MUS
PR: CPR. Necessary competency at junior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MVW 3435 Saxophone Major (3) FA MUS
PR: CPR. Necessary competency at junior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MVW 3436 Clarinet Major (3) FA MUS
PR: CPR. Necessary competency at junior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MVW 3437 Bassoon Major (3) FA MUS
PR: CPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVW 3438 Oboe Major (3) FA MUS
PR: CPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVW 3439 Clarinet Major (3) FA MUS
PR: CPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVW 3440 Bassoon Major (3) FA MUS
PR: CPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVW 3441 Flute Major (3) FA MUS
PR: CPR. Necessary competency at junior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MVW 3442 Oboe Major (3) FA MUS
PR: CPR. Necessary competency at junior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MVW 3443 Clarinet Major (3) FA MUS
PR: CPR. Necessary competency at junior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MVW 3444 Bassoon Major (3) FA MUS
PR: CPR. Necessary competency at junior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MVW 3445 Saxophone Major (3) FA MUS
PR: CPR. Necessary competency at junior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MVW 5251 Applied Flute (2) FA MUS
PR: CPR. Open to senior and advanced undergraduate students who have completed recital requirements, special non-degree seeking students, and students who have a secondary applied music requirement. Private and class instruction.

MVW 5252 Applied Oboe (2) FA MUS
PR: CPR. Open to senior and advanced undergraduate students who have completed recital requirements, special non-degree seeking students, and students who have a secondary applied music requirement. Private and class instruction.

MVW 5253 Applied Clarinet (2) FA MUS
PR: CPR. Open to senior and advanced undergraduate students who have completed recital requirements, special non-degree seeking students, and students who have a secondary applied music requirement. Private and class instruction.

MVW 5254 Applied Saxophone (2) FA MUS
PR: CPR. Open to senior and advanced undergraduate students who have completed recital requirements, special non-degree seeking students, and students who have a secondary applied music requirement. Private and class instruction.

MVW 5255 Applied Saxophone (2) FA MUS
PR: CPR. Open to senior and advanced undergraduate students who have completed recital requirements, special non-degree seeking students, and students who have a secondary applied music requirement. Private and class instruction.

NUR 2935 Selected Topics In Nursing (1-3) NU NUR
PR: Ci. Freshman or sophomore standing. Open to non-majors. Content will depend upon student demand and faculty interest and may focus on any area relevant to health care. May involve class,
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NUR 3064C Health Assessment Across The Life Span (3) NUR
PR: Admission to nursing major or CI. Focuses on history taking, physical appraisal skills basic to biopsychosocial assessment across the life span. Emphasis is placed on diagnostic reasoning process to identify alterations in health patterns.

NUR 3113 Culture of Nursing (2) NU NUR
PR: Admission to nursing major or CI. Introduction to evolving role of the professional nurse. Examines historical context of nursing’s development, nursing’s theoretical progression, and wellness-focused practice as a culture.

NUR 3114L Introduction to Clinical Judgment (3) NU NUR
PR: Concurrent with NUR 3114L Admission to nursing major. Focuses on the basic concepts of health, functional health patterns and communication. Critical thinking is used to analyze the effects of changes in health status and nursing implications.

NUR 3114L Introduction to Clinical Practice (2) NU NUR
PR: Concurrent with NUR 3114. Admission to nursing major. Includes laboratory, clinical experiences, and selected psychomotor skills. Beginning application of clinical judgment in implementing therapeutic nursing interventions for adults.

NUR 3145 Pharmacology in Nursing Practice (2) NU NUR
PR: Admission to nursing major or CI. Examines pharmacotherapeutics; pharmacodynamics; pharmacokinetics; adverse reactions and complications; therapeutic and diagnostic tests according to functional health patterns; and nursing implications.

NUR 3215 Adult Health I (3) NU NUR
PR: NUR 3113, NUR 3114, NUR 3145, NUR 3064C. Concurrent with NUR 3215L Nursing Majors. Examines adults with alterations in health maintenance, nutritional/metabolic, elimination, and sexuality/reproductive functional health care patterns. Critical thinking is used to analyze effects of changes in health status.

NUR 3215L Clinical Practice in Adult Health I (3) NU NUR

NUR 3284C Gerontological Nursing (2) NU NUR
PR: NUR 3113, NUR 3114, NUR 3145, NUR 3064C. Nursing Majors. Focuses on theories of aging and human development; assessment of functional health patterns; and planning health promotion and disease prevention activities with older adults. Critical thinking is used to analyze the effects of interventions on individuals and clients.

NUR 3829 Ethical Legal Aspects in Nursing and Health Care MW (3) NUR
PR: NUR 3113 or CI. Nursing Majors. Introduction to contemporary biocultural and legal issues confronting health care providers in a variety of settings. Focuses on identification of legal and ethical principles underlying the decision-making process in nursing and health care.

NUR 4004 Community/Intercultural Nursing (2) NU NUR
Open to both students and caregivers in health-related fields. Designed to assist students to become aware of own values as related to various cultural groups and to identify health practices and beliefs of these groups, health resources available and adaptive measures by caregivers to meet their needs.

NUR 4041 Culture In Nursing Practice (2) NU NUR
PR: NUR 3113 or CI. Nursing Majors. Introduces knowledge and skills needed to give culturally congruent nursing care to people from diverse cultural groups. Compares and analyses health-related practices, values, beliefs among major cultural groups.

NUR 4165Nursing Inquiry (2) NU NUR
PR: NUR 3113, Nursing Majors or CI. An exploration of the research process. Emphasis on identification of researchable nursing problems and evaluation of research that is applicable to nursing practice.

NUR 4194 An Interdisciplinary Perspective in HIV Disease 6A MW LW (3) NUR
Provides an interdisciplinary perspective on HIV disease. Topics include the etiology, spectrum, and treatment of HIV disease; international perspectives; issues of race, gender, and ethnicity; values, ethics, and their influences on responses to HIV; and how the media affects the epidemic.

NUR 4216 Adult Health II (3) NU NUR
PR: NUR 3829, NUR 3145, NUR 3215, NUR 3215L, NUR 3284C. Concurrent with NUR 4216L. Nursing Majors. Focuses on adults with selected health problems related to activity/exercise and cognitive/perceptual health patterns. Critical thinking is used to analyze the effects of changes in health status.

NUR 4216L Clinical Practice in Adult Health II (3) NU NUR

NUR 4245 Wellness: Health Promotion and Maintenance in Nursing (2) NU NUR
Open to non-nursing majors. Introduction to concepts of wellness and health promotion. Concepts of wellness include nutrition, exercise, rest, activity, spiritual factors and their relationship to wellness and health promotion and application to nursing practice.

NUR 4250C Specialized Techniques In Child Health Assessment (3) NU NUR
Designed to teach the reliable administration and interpretation of the NCAST II and the HOME instruments. Inter-observer reliability will be achieved through observation of parent-child interaction.

NUR 4525 Psychiatric/Mental Health (2) NU NUR
PR: NUR 4616, NUR 4616L, NUR 4636, NUR 4636L. Concurrent with NUR 4525L. Nursing Majors. Examines historical context of nursing’s development, nursing’s theoretical progression, and wellness-focused practice as a culture.

NUR 4525L Clinical Practice in Psychiatric/Mental Health (1) NU NUR
PR: NUR 4616, NUR 4616L, NUR 4636, NUR 4636L. Concurrent with NUR 4525. Nursing Majors. Focuses on clinical intervention using critical thinking and communication skills with clients who require complex psychiatric rehabilitation care. Opportunities are offered to apply knowledge of psychopathology and psychopharmacological therapies.

NUR 4616 Family Health (4) NU NUR

NUR 4616L Clinical Practice In Family Health (3) NU NUR
PR: NUR 4216, NUR 4216L. Concurrent with NUR 4616L. Nursing Majors. Includes therapeutic interventions for childbearing and childrearing families within a variety of settings.

NUR 4636 Community Health (2) NU NUR
PR: NUR 4216, NUR 4216L, NUR 4041. Concurrent with NUR 4636L. Nursing Majors and admission to the major for RN or BS students. Focuses on theories/concepts essential to community health nursing, emphasizing illness prevention and health promotion of individuals, families, communities, and the environment. Focuses on health promotion and illness prevention with individuals, families and communities.

NUR 4643 Nursing Interventions into the Acute Effects of Drugs and Alcohol Abuse (2) NU NUR
Focuses on the assessment and treatment of individuals and families who are in the acute phases of addiction. Emphasis will be placed on treatment outcomes for designated populations with consideration for cultural, socioeconomic, political and ethical/legal factors.

NUR 4644 Nursing Interventions into the Rehabilitation of Clients who Abuse Substance (2) NU NUR
Focuses on models of treatment and interventions for clients and families who are in the rehabilitation and relapse prevention phases of treatment for addictions. Emphasis will be placed on rehabilitation outcomes for designated populations with consideration for criminal justice, socioeconomic, political and ethical/legal factors.

NUR 4645 Substance Abuse Across the Lifespan (2) NU NUR
This course introduces the student to concepts of substance abuse and theories of addiction. The applicability of theories and concepts to clinical assessment, diagnosis and intervention with the client is emphasized. Special populations across the lifespan are explored.

NUR 4765C Rehabilitation Across the Life Span (2) NU NUR
PR: NUR 4616, 4616L, 4636, 4636L. Nursing Major or CI. Basic concepts of rehabilitation related to human responses. Analysis of changes in health status and nursing implications.

NUR 4766 Critical Care (2) NU NUR
PR: NUR 4616, NUR 4616L, NUR 4636, NUR 4636L. Nursing Majors or CI. Basic concepts of critical care nursing, focusing on selected health problems to analyze the affects of changes in health status.
NUR 4792 Sexually Transmitted Diseases And HIV Infection (2) NU NUR
Open to students and caregivers in health related fields. Examines prevalent sexually transmitted diseases and HIV infection from a nursing perspective. Emphasis is on epidemiological principles, immunology, treatment, prevention, and ethical/legal considerations.

NUR 4835 Leadership/Management (3) NU NUR
PR: NUR 4616, 4616L, 4636, 4636L. Nursing Majors and admission to Nursing for BS student. Program examines health care delivery systems and explores principles of leadership/management and ethical/legal issues within the systems. Skills of leaders and managers are implemented in nursing practice with individuals and groups.

NUR 4905C Independent Study (1-5) NU NUR
PR: Permission of faculty. Open to majors and non-majors. Individual or group investigation of problems relevant to the majors in individuals or groups. Project requirements individually planned with faculty preceptor.

NUR 4935 Selected Topics In Nursing (2-8) NU NUR
PR: Junior or senior standing or permission of faculty. Content will depend upon demand and faculty interest and may focus on any area relevant to nursing practice. May involve class, seminar, and/or clinical laboratory.

NUR 4948L Preceptorship (3) NU NUR
PR: NUR 4525, NUR 4525L, 4616, 4616L, NUR 4636, NUR 4636L. Nursing Majors. Individually contracted practice collaboratively planned by students, faculty and agency personnel.

OCE 2001 Introduction to Oceanography NS (3) AS MSC
Overview of biological, chemical, geological, and physical oceanography. Algal and invertebrate. Selected topics.

OCE 4930 Selected Topics in Marine Science (1-4) AS MSC
Selected topics in the marine sciences including marine biology, marine chemistry, marine geology and geophysics, physical oceanography, and interdisciplinary topics relating to marine environments.

ORI 2000 Introduction to Communication As Performance (3) AS SPE
Designed to develop proficiency in the understanding and oral communication of literary and other written materials.

ORI 3950 Communication As Performance Lab (1-3) AS SPE
PR: ORI 2000 or CI. The study, rehearsal, and performance of literary texts for Readers Theatre and Chamber Theatre productions.

ORI 4120 Performance of Poetry (3) AS SPE
PR: ORI 2000 or CI. Critical appreciation of lyric and narrative poetry and communication of that appreciation to audience. Study of poetic technique.

ORI 4310 Group Performance of Literature (3) AS SPE
PR: ORI 2000 or CI. Designed to introduce the student to and give experience in various forms of group approaches to performance.

ORI 4551 Performance and Video (3) AS SPE
PR: ORI 2000. CR: ORI 3950. This course features adaptation, direction, and performance of literature for video productions.

ORI 5930 Topics in Performance Genres (3) AS SPE
Variable topics course.

PAD 3003 Introduction to Public Administration SS (3) AS PAD
Examination of organizational behavior and change, policy process, public management, financial administration, and personnel management from the perspective of public and social delivery.

PAD 4204 Public Finance Administration (3) AS PAD
Analysis of problems in the growth and development of public budgetary theory and Federal budgetary innovations.

PAD 5335 Issues in Public Administration and Public Policy (3) AS PAD
Sr. & GS only. Selected issues and topics in Public Administration and Public Policy.

PAD 5331 Concepts and Issues in Public Planning (3) AS PAD
PR: URP 4050 or URP 6056. GS or Sr Analysis of basic concepts, issues, and strategies of planning, policy determination, collection of information, and decision-making.

PAD 5505 Administrative Law (3) AS PAD
An examination of the institutional and statutory bases and limitations of the administrative process, administrative adjudication, rule making, and the judicial review of such actions.

PAD 5700 Research Methods in Public Administration (3) AS PAD
This course provides the student with the fundamental skills and knowledge of how research is designed, implemented, analyzed, and utilized in public sector agencies. Available to majors and non-majors.

PAD 5807 Administration of Urban Affairs (3) AS PAD
GS or Sr Analysis of the role of the administrator at the municipal level, the division of functions, policy formation, alternative governmental structures, effects on the administrative process.

PAD 5836 Comparative Public Administration (3) AS PAD
GS or Sr How organizations and managers perform within a particular environment, potential impact of innovation, and how services are accomplished in a variety of socio-economic environments.

PCB 1511 Molecular and Human Genetics (3) AS BIO
PR: Acceptance in USF-Hillsborough County Biomedical and Life Sciences Program. Molecular genetics, with applications to biomedical science; genetic engineering; chromosome; and molecular architecture, abnormalities, and other topics. Laboratory included.

PCB 1910 Topics in Biomedical Science (3) AS BIO
PR: Acceptance in USF-Hillsborough County Biomedical and Life Science Program. Designed to initiate high level students to the fundamentals of scientific research. Students are given lectures and perform laboratory exercises in pathogenic microbiology, immunology, marine biology, and plant biochemistry. Most of their time is spent working on individual research projects.

PCB 3023 Cell Biology (3) AS BIO
PR: BSC 2010, BSC 2010L, BSC 211L, BSC 211L, and CHM2046. A discussion of the concept and significance of the cell to biology, biological molecules and metabolic processes within the cell; cellular energy conversion systems; and control of cellular metabolism. Lec.
PCB 5615C Evolutionary Genetics (3) AS BIO
PR: PCB 3063 Study of factors such as mutation, natural selection, and genetic drift that modify the genetic structure of populations.

PCB 5645C Principles of Neuroscience (4) AS BIO
PR: PCB 4723 Study of the mammalian brain’s structure and function, including neuroanatomy, neuropharmacology, and neurophysiology of the human brain. Topics include brain imaging, dementia, and mechanisms of learning/memory. Brain research techniques are also discussed, as are basic neuropathological processes that result in abnormal brain function.

PEL 2112 Golf I (2) ED EDJ
S/U only. Introductory experience in the sport of golf. Fundamental skills, information, strategy, and participation.

PEL 2441 Racquetball (2) ED EDJ
PR: Red Cross beginning racquetball with opportunity for competition and tournament play.

PEM 2116 Strength and Aerobic Development (2) ED EDJ
S/U only. Development and refinement of the skills and strategies of Racquetball with opportunity for competition and tournament play.

PEM 2117 Weight Training (2) ED EDJ
S/U only. Knowledge and techniques necessary for increasing muscle function, Assessment of status and development of a personal program.

PET 2321 Weightlifting (2) ED EDJ
S/U only. Review and refinement of fundamental skills, presentation and practice of the various offensive strategies.

PET 2322 Wrestling (2) ED EDJ
S/U only. Continuation of PET 1314L. Reinforcement of basic skills, supplementary strokes, greater emphasis on tactics and fighting strategies.

PET 2441 Racquetball (2) ED EDJ
S/U only. Development and refinement of the skills and strategies of Racquetball with opportunity for competition and tournament play.

PET 2561 Exercise Physiology (3) ED EDJ
PR: PEN 1121 or equivalent. A study of the structure and function of the skeletal and muscular systems and of mechanical principles related to psycho-motor performance. Open to non-majors.

PET 2562 Exercise Physiology II (3) ED EDJ
PR: PEN 1121 or equivalent. A study of the effects of physical activity on the body. Topics include acute and chronic adaptation of the cardiovascular, muscular, metabolic, hormonal, and energy systems to exercise. Open to non-majors.

PET 2802C Care and Prevention of Physical Injuries (3) ED EDP
PR: FDR. Principles and techniques of conditioning athletes for competition; prevention and care of injuries in physical education and athletic activities.

PET 3031 Motor Development and Assessment (3) ED EDP
Study of the assessment, evaluation and motor development performance of children and adolescents and application of principles of motor skills acquisition in physical education instruction.

PET 3032 Issues in Sport MW (3) ED EDP
A study of organized sport as a pervasive part of contemporary society. By increasing understanding of some of the issues and controversies based in the structure of sport and society, individuals will be able to understand and improve sport experiences for themselves and others.

PET 3041 Kinesiology (3) ED EDP
A study of the structure and function of the skeletal and muscular systems and of mechanical principles related to psycho-motor performance. Open to non-majors.

PET 3351 Exercise Physiology III (3) ED EDP
PR: Red Cross beginning racquetball with opportunity for competition and tournament play.

PET 3352 Exercise Physiology IV (3) ED EDP
PR: Red Cross beginning racquetball with opportunity for competition and tournament play.

PET 3353 Exercise Physiology V (3) ED EDP
PR: Red Cross beginning racquetball with opportunity for competition and tournament play.

PET 3354 Exercise Physiology VI (3) ED EDP
PR: Red Cross beginning racquetball with opportunity for competition and tournament play.

PET 3355 Exercise Physiology VII (3) ED EDP
PR: Red Cross beginning racquetball with opportunity for competition and tournament play.

PET 3356 Exercise Physiology VIII (3) ED EDP
PR: Red Cross beginning racquetball with opportunity for competition and tournament play.

PET 3357 Exercise Physiology IX (3) ED EDP
PR: Red Cross beginning racquetball with opportunity for competition and tournament play.

PET 3358 Exercise Physiology X (3) ED EDP
PR: Red Cross beginning racquetball with opportunity for competition and tournament play.

PET 3359 Exercise Physiology XI (3) ED EDP
PR: Red Cross beginning racquetball with opportunity for competition and tournament play.

PET 3360 Exercise Physiology XII (3) ED EDP
PR: Red Cross beginning racquetball with opportunity for competition and tournament play.

PET 3361 Exercise Physiology XIII (3) ED EDP
PR: Red Cross beginning racquetball with opportunity for competition and tournament play.

PET 3362 Exercise Physiology XIV (3) ED EDP
PR: Red Cross beginning racquetball with opportunity for competition and tournament play.

PET 3363 Exercise Physiology XV (3) ED EDP
PR: Red Cross beginning racquetball with opportunity for competition and tournament play.

PET 3364 Exercise Physiology XVI (3) ED EDP
PR: Red Cross beginning racquetball with opportunity for competition and tournament play.

PET 3365 Exercise Physiology XVII (3) ED EDP
PR: Red Cross beginning racquetball with opportunity for competition and tournament play.

PET 3366 Exercise Physiology XVIII (3) ED EDP
PR: Red Cross beginning racquetball with opportunity for competition and tournament play.

PET 3367 Exercise Physiology XIX (3) ED EDP
PR: Red Cross beginning racquetball with opportunity for competition and tournament play.

PET 3368 Exercise Physiology XX (3) ED EDP
PR: Red Cross beginning racquetball with opportunity for competition and tournament play.

PET 3369 Exercise Physiology XXI (3) ED EDP
PR: Red Cross beginning racquetball with opportunity for competition and tournament play.

PET 3370 Exercise Physiology XXII (3) ED EDP
PR: Red Cross beginning racquetball with opportunity for competition and tournament play.

PET 3371 Exercise Physiology XXIII (3) ED EDP
PR: Red Cross beginning racquetball with opportunity for competition and tournament play.

PET 3372 Exercise Physiology XXIV (3) ED EDP
PR: Red Cross beginning racquetball with opportunity for competition and tournament play.

PET 3373 Exercise Physiology XXV (3) ED EDP
PR: Red Cross beginning racquetball with opportunity for competition and tournament play.

PET 3374 Exercise Physiology XXVI (3) ED EDP
PR: Red Cross beginning racquetball with opportunity for competition and tournament play.

PET 3375 Exercise Physiology XXVII (3) ED EDP
PR: Red Cross beginning racquetball with opportunity for competition and tournament play.

PET 3376 Exercise Physiology XXVIII (3) ED EDP
PR: Red Cross beginning racquetball with opportunity for competition and tournament play.

PET 3377 Exercise Physiology XXIX (3) ED EDP
PR: Red Cross beginning racquetball with opportunity for competition and tournament play.

PET 3378 Exercise Physiology XXX (3) ED EDP
PR: Red Cross beginning racquetball with opportunity for competition and tournament play.

PET 3379 Exercise Physiology XXXI (3) ED EDP
PR: Red Cross beginning racquetball with opportunity for competition and tournament play.

PET 3380 Exercise Physiology XXXII (3) ED EDP
PR: Red Cross beginning racquetball with opportunity for competition and tournament play.

PET 3381 Exercise Physiology XXXIII (3) ED EDP
PR: Red Cross beginning racquetball with opportunity for competition and tournament play.

PET 3382 Exercise Physiology XXXIV (3) ED EDP
PR: Red Cross beginning racquetball with opportunity for competition and tournament play.

PET 3383 Exercise Physiology XXXV (3) ED EDP
PR: Red Cross beginning racquetball with opportunity for competition and tournament play.

PET 3384 Exercise Physiology XXXVI (3) ED EDP
PR: Red Cross beginning racquetball with opportunity for competition and tournament play.

PET 3385 Exercise Physiology XXXVII (3) ED EDP
PR: Red Cross beginning racquetball with opportunity for competition and tournament play.

PET 3386 Exercise Physiology XXXVIII (3) ED EDP
PR: Red Cross beginning racquetball with opportunity for competition and tournament play.

PET 3387 Exercise Physiology XXXIX (3) ED EDP
PR: Red Cross beginning racquetball with opportunity for competition and tournament play.

PET 3388 Exercise Physiology XL (3) ED EDP
PR: Red Cross beginning racquetball with opportunity for competition and tournament play.

PET 3389 Exercise Physiology XLI (3) ED EDP
PR: Red Cross beginning racquetball with opportunity for competition and tournament play.

PET 3390 Exercise Physiology XLII (3) ED EDP
PR: Red Cross beginning racquetball with opportunity for competition and tournament play.
PET 3660 Athletic Training Administration and Policy (3) ED EDP
PR: CC. Analysis and application of organizational skills and administrative structure of the athletic training profession, including current theory about budget management, medical record keeping, drug testing, facility design and maintenance, legal aspects of sports medicine, athletic training, business management, public relations, and current educational concepts, and administrative policy. Fall.

PET 3670L Clinical Instruction in Athletic Training I (3) ED EDP PR: CC. Observation and performance of basic athletic training skills under the direct supervision of an NATABOC certified/licensed athletic trainer. This course provides students with the opportunity to develop competence in a variety of introductory athletic training skills. Clinical experiences are obtained in the university's sports medicine facilities and will be accompanied by one-hour seminar each week. Spring.

PET 3671L Clinical Instruction in Athletic Training II (3) ED EDP PR: PET 3670C, CC. Continuation of clinical experience utilizing new skills under the direction of an NATABOC certified/licensed athletic trainer. This course provides students with the opportunity to develop competence in a variety of introductory and mid-level athletic training skills. Clinical experiences are obtained in the university's sports medicine facilities and/or approved affiliates and will be accompanied by a one-hour seminar each week. Spring.

PET 3931 Selected Topics (1-3) ED DJ DPR: Topics offered are selected to reflect student need and faculty interest.

PET 3943 Physical Education Internship: Middle School (4) ED EDP A part-time internship in middle school physical education. Focus on the implementation of physical education to the needs of the pre- and early adolescent learner, the organization and purpose of the middle school, and application appropriate content and methodologies.

PET 4141 Trends and Tasks - Elementary Physical Education (3) ED EDP Taken concurrently with PET 4492 Physical Education Internship: Elementary, Physical Education Majors only. Current trends are evaluated from a historical and philosophical perspective. Non-teaching tasks are identified as part of the professional role. Evaluation and future perspectives of professional development plan developed in previous semesters.

PET 4142 Trends and Tasks - Secondary Physical Education (1-4) ED EDP Taken concurrently with PET 4494 Physical Education Internship: Secondary, Physical Education Majors only. Current trends are evaluated from a historical and philosophical perspective. Non-teaching tasks are identified as part of the professional role. Evaluation and future perspectives of professional development plan developed in previous semesters.

PET 4304 Principles and Issues in Coaching (3) ED EDP The application of principles from philosophy, psychology, sociology, and physical activity to competitive athletics and coaching.

PET 4353 Exercise Physiology II (3) ED EDP PR: PET 3352. A study of Exercise Physiology focusing on the adult. Includes specific populations such as the obese, heart patients, arthritics, elderly, and high performance athletes. Open to non-majors.

PET 4384 Health-Fitness Appraisal & Exercise Prescription (3) ED EDP PR: PET 3352. Techniques in conducting health-fitness test and exercise prescription for adults. Includes cardiovascular strength, flexibility, body composition, health risk testing, exercise prescribing, and monitoring. Open to non-majors.

PET 4401 Organization & Administration of Physical Education Programs (3) ED EDP A study of organizational and administrative procedures for physical education programs in elementary and secondary schools. Includes scheduling, budget, facilities, extra-curricular programs, and the selection and supervision of staff.

PET 4404 Organization & Administration of Wellness Programs (3) ED EDP Design and implementation of various types of wellness programs with emphasis on assessment, evaluation, management, staffing, participant adherence, program design, budgeting, legal liability, and marketing.

PET 4432 Instructional Design and Content: Physical Education Elementary (3) ED EDP This is the second of a three-course sequence in which students study movement forms and instructional processes suitable for elementary age students.

PET 4433 Instructional Design and Content: Physical Education Elementary II (3) ED EDP This course prepares students to select, plan, conduct complex movement experiences for students K-6.

PET 4442 Instructional Design and Content: Physical Education Secondary (3) ED EDP Development of knowledge and skills related to the teaching of selected movement activities such as team sports, gymnastics, and physical fitness. Focus is on understanding mechanical principles utilized within those activities as well as on instructional progression and the preparation of materials for instruction at the secondary school level.

PET 4443 Instructional Design and Content: Physical Education Secondary II (3) ED EDP In this course, students are prepared to plan, conduct, and evaluate complex movement experiences in games, dance, gymnastics and physical fitness appropriate for students.

PET 4627 Management of Athletic Injuries (3) ED EDP PR: CC. Advanced theory of pathology in injury, management of tissue and bone healing environments, disease, internal illness and injury and other general medical conditions. Issues related to radiology and pharmacology are also discussed. Summer.

PET 4632C Therapeutic Modalities (3) ED EDP PR: CC. This course provides an introduction to the theoretical and practical applications of modalities for the prevention, management and rehabilitation of physically active individuals. Concepts pertaining to the use of pharmacology, thermotherapy, cryotherapy, electrical stimulation, hydrotherapy, fluidotherapy, ultrasound, bio-feedback and manual techniques will be emphasized. Fall.

PET 4633C Therapeutic Rehabilitation (3) ED EDP PR: CC. Theories and applications methods of comprehensive therapeutic rehabilitation programs for injuries commonly sustained by the physically active. Fall.

PET 4672L Clinical Practice in Athletic Training I (3) ED EDP Continuation of clinical experience utilizing new skills under the direction of an NATABOC certified/licensed athletic trainer accompanied by a one-hour seminar each week. This course provides students with the opportunity to develop competence in a variety of mid-level and advanced athletic training skills. Students may be assigned to a USF athletic team and/or one or more off-campus clinical affiliations. Students at this level will develop instruction skills by acting as peer-supervisors for level I and II students. Fall.

PET 4673L Clinical Practice in Athletic Training II (3) ED EDP Continuation of clinical experience utilizing new skills under the direction of an NATABOC certified/licensed athletic trainer accompanied by a one-hour seminar each week. This course provides students with the opportunity to develop competence in a variety of mid-level and advanced athletic training skills. Students may be assigned to a USF athletic team and/or one or more off-campus clinical affiliations. Students at this level will develop instruction skills by acting as peer-supervisors for level I and II students. Fall.

PET 4905 Independent Study: Professional Physical Education (1-4) ED EDP S/U only. Specialized independent study determined by the student's needs and interests.

PET 4933 Seminar in Sports Medicine (3) ED EDP The advanced study and discussion of specialized topics and contemporary issues related to the field of athletic training. Emphasis on the roles and responsibilities of medical and allied health professionals comprising the sports medicine team. Spring.

PET 4935 Case Studies in Athletic Health Care (3) ED EDP PR: CC. Capstone course intended to provide a unifying opportunity to utilize concepts, principles and skills learned from other athletic training courses. Spring.

PET 4942 Physical Education Internship: Elementary (4) ED EDP S/U only. A part-time internship in elementary school physical education. Focus on the nature of the total elementary school curriculum, characteristics of students, and application of appropriate content and instructional competencies.

PET 4944 Physical Education Internship: Secondary (4) ED EDP S/U only. A part-time internship in high school level physical education with focus on the relationship of physical education to the needs of the early adolescent and the implementation of appropriate content and methodology.

PET 4946 Associate Teaching Physical Education: Elementary (12) ED EDP S/U only. A full-time internship in the elementary school in which the student undertakes the full range of teaching responsibilities in elementary physical education.
PHI 4947 Associate Teaching Practicum (2) EDP
PR: PET 4622, admission to the Physical Education program. DPR.
A ten-week training room practicum on skills in preventive stripping and review first aid and rehabilitation techniques, followed by a five-
week practical experience in local high school physical education programs.

PGY 2110C Color Photography (3) AS COM
PR: PGY 3620 or CI. Laboratory required. Development of knowl-
dge and skills of color photography for publication and presenta-
tions. Emphasis on the use of transparency and negative color
materials in their application to the media.

PGY 2401C Beginning Photography (3) FA ART
Introduction to the expressive possibilities of photographic media.
Projects and assignments will introduce students to both traditional and different approaches to working with light-sensitive materials
with an emphasis on the interdependence of form, technique, and
concept. The course will also provide an overview of significant
trends and directions in contemporary art photography.

PGY 3610 Photojournalism I (3) AS COM
PR: MMC 2100 and MMC 3602. Laboratory required. Camera
operation, darkroom techniques, picture composition, editing, eth-
ics, history and laws, in connection with photojournalism.

PGY 3620 Photojournalism II (3) AS COM
PR: PGY 3610. Laboratory required. Advanced process and prac-
tice of photography for publication. Content includes advanced
camera and laboratory techniques, publication requirements and
theory of photochemical color separation used in magazine and
newspaper. Emphasis is placed on student production.

PGY 4410C Advanced Photography (3) FA ART
PR: PGY 3620 or permission of instructor.

PGY 5425C Photography (4) FA ART
PR: CI. Advanced work in photography and related media leading to
development of personal/expressive statements.

PHH 2000 Introduction to Philosophy 6A HP (3) AS PHI
An study of philosophical problems and introductions.

PHH 3062 History of Philosophy: Ancient and Medieval (3) AS PHI
A survey of Western philosophy from the pre-Socratics to the end
of the Middle Ages.

PHH 3420 History of Philosophy: Modern (3) AS PHI
A survey of Western philosophy from the end of the Middle Ages to
the nineteenth century.

PHH 4440 Continental Philosophy (3) AS PHI
A study of developments in post-Kantian European philosophy.

PHH 4600 Contemporary Philosophy 6A MW (3) AS PHI
Selected schools of twentieth century thought such as idealism,
positivism, pragmatism, realism, and existentialism.

PHH 4700 American Philosophy 6A MW (3) AS PHI
Major traditions in American thought, Puritanism, the Enlightenment,
Transcendentalism, Idealism, Pragmatism, and Analytic Philosophy
in relation to American culture.

PHH 4820 Chinese Philosophy (3) AS PHI
A survey of Confucianism, Taoism and other aspects of Chinese
thought. The course is available to both majors and non-majors and
does not have laboratory sections associated with it.

PHI 1103 Critical Thinking SS (3) AS PHI
Methods of thought that lead to reliable conclusions, with emphasis
on concrete cases in ordinary thinking and the sciences.

PHI 2100 Introduction to Formal Logic 6A GM (3) AS PHI
An elementary study of propositional, predicate, class and syllogis-
tical logical analysis with some attention to basic problems of logical theory.

PHI 2600 Ethical Theory (3) AS PHI
A study of ethical theories, concepts, problems and methods.

PHI 2631 Ethics and Business SS (3) AS PHI
An application of traditional ethical theories to contemporary prob-
lems in business.

PHI 3404 Scientific Method (3) AS PHI
Probability, inductive inference, the hypothetico-deductive method,
experimental method, and selected topics in the philosophy of science.

PHI 3630 Contemporary Moral Issues SS (3) AS PHI
Open to all students. A study of contemporary moral issues
concerning racism, sex, sexism, abortion, poverty, crime, war,
suicide, and human rights in general.

PHI 3633 Biomedical Ethics (3) AS PHI
This course will focus on the ethical issues arising from advances
in medical practice, delivery of health care, and scientific research.

PHI 3636 Professional Ethics (3) AS PHI
An examination of the ethical problems that professionals will face
in the complex, global society of the next few decades: confiden-
tially-divided loyalty, the pill, etc.

PHI 3640 Environmental Ethics SS (3) AS PHI
A study of alternative theories of environmental ethics, including
the application of these theories to contemporary environmental prob-
lems such as pollution, resource depletion, species extinction, and
land use.

PHI 3700 Philosophy of Religion 6A SS (3) AS PHI
Analysis of religious experience and activity and examination of the
philosophy of modern western philosophy.

PHI 3905 Directed Study (1-4) AS PHI
PR: CI. Approval slip from instructor required. Individual study
directed by a faculty member.

PHI 3930 Selected Topics (1-4) AS PHI
PR: CI. Selected topics according to the needs of the student.

PHI 4073 African Philosophy MW (3) AS PHI
A descriptive and analytical study of African philosophical thought,
reflective featuring comparisons of African and Western categorie-
ses of thought.

PHI 4300 Theory of Knowledge 6A MW (3) AS PHI
An examination of human knowledge; its scope and limits, and an
evaluation of evidence, criteria of truth, the nature of belief,
constructions for meanings and non-meanings. Open to all students.

PHI 4320 Philosophy of Mind 6A MW (3) AS PHI
A study of the current theories of philosophy of mind, including
the nature and status of mind, mind/body dualism, the
relationship of mind and body, the problems of other minds, the
physical basis for intelligence, etc.

PHI 4632 Feminist Ethics MW (3) AS PHI
A study of the varied approaches to moral reasoning taken by
feminist ethical writers such as Wollstonecraft, Mill, Gilligan, Daly,
Hoagland and others. May also be taken for credit in Women's Studies.

PHI 4670 Contemporary Ethical Theory (3) AS PHI
A survey of contemporary ethical theory, focusing both on the
literature about the status of ethical theorizing—moral skepticism,
moral nihilism, narrative ethics—and on specific types of theories:
decomultivalumist theories, consequentialist theories, rights-based theo-
ries, virtue theories.

PHI 4800 Aesthetics 6A MW (3) AS PHI
A study of traditional and contemporary aesthetic theories with
emphasis on creativity, nature, the nature of the art work, the
esthetic response, expressiveness, form and content, as well as
art and morality.

PHI 4905 Directed Study (1-4) AS PHI
PR: CI. Approval slip from instructor required. Individual study
directed by a faculty member.

PHI 4930 Selected Topics (1-3) AS PHI
PR: CI. Approval slip from instructor required. Selected topics
according to the needs of the senior students.

PHI 5135 Symbolic Logic (3) AS PHI
PR: PHI 2100 or CI. Study of topics such as the following: Metatheory
of propositional and predicate logic, related metatheoretical results,
alternative logic.

PHI 5225 Philosophy of Language (3) AS PHI
PR: Eight hours of philosophy, major in linguistics, or CI. An
examination of semantically, syntactical, and functional theories of
language with special attention given to the problems of meaning,
linguistic reference, syntax, and the relations between scientific
languages and ordinary linguistic usage. Seminar format.

PHI 5913 Research (1-4) AS PHI
PR: CI. Approval slip from instructor required. Individual research
supervised by a faculty member.

PHI 5934 Selected Topics (1-3) AS PHI
PR: CI. Approval slip from instructor required. Selected topics
according to the needs of the student.

PHM 3020 Philosophy of Love and Sex (3) AS PHI
Discussion of Philosophies of Love/Sex of Plato, Aristotle, Epicurus,
Aquinas, Hume, Kant, Schopenhauer, Russell, Sartre, Marx, etc.

PHM 3100 Social Philosophy 6A SS HP (3) AS PHI
An analysis of rival theories of social order and their philosophical
foundations.

PHM 3400 Introduction to Philosophy of Law (3) AS PHI
A study of the fundamental concepts of law from a philosophic
standpoint Including crime, justice, punishment, free speech, insan-
PHM 4120 Major Black Thinkers MW (3) AS AFA
Survey of major themes and issues in African/African-American intellectual and political thought with an emphasis on theories of nationalism. Works of individuals such as Martin Delany, Booker T. Washington, W. E. B. DuBois, Marcus Garvey, Malcolm X, and Angela Davis are considered.

PHM 4322 Ancient and Medieval Political Philosophy MW (3) AS PHI
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.

PHM 4331 Modern Political Philosophy 6A MW (3) AS PHI
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.

PHM 4340 Contemporary Political Philosophy 6A MW (3) AS PHI
A survey of political philosophy in the twentieth century, including an examination of the ethical, metaphysical and epistemological bases of these philosophies.

PHM 5125 Topics In Feminist Philosophy (3) AS PHI
A study of recent feminist philosophical approaches to epistemology, aesthetics or political philosophy. May also be taken for credit in Women's Studies.

PHP 3786 Existentialism 6A HP (3) AS PHI
A study of the religious and atheistic existentialists and the bearing of their views on religion, ethics, metaphysics, and theory of knowledge.

PHP 4000 Plato 6A MW (3) AS PHI
The examination of Plato will include the dialogues Protagoras, Georgias, Meno, Republic, and the Laws. Critical analysis of Plato's philosophy.

PHP 4010 Aristotle 6A MW (3) AS PHI
Study of Aristotle's philosophy.

PHP 4410 Kant (3) AS PHI
Lecture and discussion of Kant's philosophy, especially the Critique of Pure Reason.

PHP 4740 The Rationalists 6A MW (3) AS PHI
A careful study of the epistemologies of Descartes, Spinoza, Leibniz, and Hume. The focus will be on the bearing of their views on religion, ethics, metaphysics, and theory of knowledge.

PHP 4745 The Empiricists 6A (3) AS PHI
A careful study of epistemologies of Locke, Berkeley, Hume, and Thomas Reid.

PHP 4784 Analytical Philosophy 6A (3) AS PHI
A study of the method devoted to clarifying philosophical problems through analysis of the language in which these problems are stated.

PHP 4788 Philosophy of Marxism 6A MW (3) AS PHI
A critical survey of Marxist philosophy from Marx and Engels to Mao Tse-Tung and Herbert Marcuse. Hegelian foundations of Marxist philosophy analyzed in detail.

PHY 2020 Conceptual Physics NS (3) AS PHY
No credit for Physics or Mathematics majors. A qualitative, non-mathematical investigation of physics, emphasizing its influence on life today.

PHY 3038 Energy and Humanity NS (3) AS PHY
Social, economic, and political aspects of energy. Includes energy conservation, environmental impact, energy-sourced alternatives, changing lifestyles, and personal use of solar energy. The relevant basic laws of physics and the scientific method are emphasized. Field trips and audiovisual presentations play important roles.

PHY 2048 General Physics (3) AS PHY
PR: MAC 2281 or MAC 2311. Must be taken concurrently with lab and if dropped, then dropped simultaneously. May not receive credit for both the PHY 2053L and PHY 2048L courses. First semester of a two semester sequence of general physics (mechanics, wave motion, sound, thermodynamics, geometrical and physical optics, electricity, and magnetism) for physics majors and engineering students.

PHY 2048L General Physics Laboratory (1) AS PHY
PR: MAC 2281 or MAC 2311. Must be taken concurrently with lecture and, if dropped, then dropped simultaneously. May not receive credit for both the PHY 2053L and PHY 2048L courses. First semester of a two semester sequence of general physics (mechanics, wave motion, sound, thermodynamics, geometrical and physical optics, electricity, and magnetism) and laboratory for physics majors and engineering students.

PHY 2048L General Physics Laboratory (1) AS PHY
PR: MAC 2282 or MAC 2312, PHY 2048, PHY 2048L. Must be taken concurrently with lab and, if dropped, then dropped simultaneously. May not receive credit for both the PHY 2054 and PHY 2049 courses. Second semester of general physics and laboratory for physics majors and engineering students.

PHY 2048L General Physics Laboratory (1) AS PHY
PR: MAC 2282 or MAC 2312, PHY 2048, PHY 2048L. Must be taken concurrently with lecture and, if dropped, then dropped simultaneously. May not receive credit for both the PHY 2054 and PHY 2049L courses. Second semester of general physics and laboratory for physics majors and engineering students.

PHY 2053 General Physics (3) AS PHY
PR: MAC 2282 or MAC 2312, PHY 2048, PHY 2048L. Must be taken concurrently with lecture and, if dropped, then dropped simultaneously. May not receive credit for both the PHY 2054 and PHY 2049L courses. Second semester of general physics and laboratory for physics majors and engineering students.

PHY 2053 General Physics (3) AS PHY
PR: MAC 2282 or MAC 2312, PHY 2048, PHY 2048L. Must be taken concurrently with lecture and, if dropped, then dropped simultaneously. May not receive credit for both the PHY 2054 and PHY 2049L courses. Second semester of general physics and laboratory for physics majors and engineering students.

PHY 2054 General Physics (3) AS PHY
PR: PHY 2053, PHY 2053L. Must be taken concurrently with lecture and, if dropped, then dropped simultaneously. May not receive credit for both the PHY 2054 and PHY 2049L courses. Second semester of non-calculus-based general physics for science students.

PHY 2054 General Physics Laboratory (1) AS PHY
PR: PHY 2053, PHY 2053L. Must be taken concurrently with lecture and, if dropped, then dropped simultaneously. May not receive credit for both the PHY 2054 and PHY 2049L courses. Second semester of general physics laboratory for science students.

PHY 2054 General Physics Laboratory (1) AS PHY
PR: PHY 2053, PHY 2053L. Must be taken concurrently with lecture and, if dropped, then dropped simultaneously. May not receive credit for both the PHY 2054 and PHY 2049L courses. Second semester of general physics laboratory for science students.

PHY 3101 Modern Physics (3) AS PHY
PR: PHY 2049 or CR: PHZ 3101. First semester of a two-semester sequence. Review of vector algebra and vector calculus. Dynamics of single particles and systems of particles; central forces; rotation about an axis; statics; and virtual work.

PHY 3321 Mechanics I (3) AS PHY
PR: PHY 2048 or PHY 3221. First semester of a two-semester sequence. Continuation of PHY 2048 and PHY 3221. Laboratory. First semester of sequence PHY 3321C, PHY 4324C.

PHY 3322 Mechanics II (3) AS PHY
PR: PHY 2048 or PHY 3221. First semester of a two-semester sequence. Continuation of PHY 2048 and PHY 3221. Laboratory. First semester of sequence PHY 3321C, PHY 4324C.

PHY 3323 Electricity and Magnetism I (4) AS PHY
PR: PHY 2049 or PHY 3221. First semester of a two-semester sequence. Continuation of PHY 2049 and PHY 3221. Laboratory. First semester of sequence PHY 3323C, PHY 4324C.

PHY 3324 Electricity and Magnetism II (4) AS PHY
PR: PHY 3323C, PHY 4324C. First semester of a two-semester sequence. Continuation of PHY 3323C and PHY 4324C. Laboratory. First semester of sequence PHY 3323C, PHY 4324C.

PHY 4031 Great Themes in Physics 6A MW (3) AS PHY

PHY 4044 Electronic Devices and Test Instrumentation (4) AS PHY
PR: General Physics or C. Not for major credit. Introduces the fundamentals of analog and digital electronics used in measurements and instrumentation. Weekly labs give hands-on experience in breadboarding electronic circuits and using test instrumentation.
PH 432L Advanced Laboratory (2) AS PHY PR: PHY 3822L. Experimental work primarily related to modern physics. Emphasis on experimental techniques used in current research.

PHY 4905 Independent Study (1-3) AS PHY PR: CI. S/U only. Specialized, independent study determined by the student's need and interest. The written contract required by the College of Arts and Sciences specifies the regulations governing independent study. S/U only. All undergraduate physics majors must enroll in this course at least once. Regular attendance is required. This course introduces students to the research areas in the Physics Department.

PHY 4910 Undergraduate Research (1-4) AS PHY PR: Senior or advanced junior standing and CC. S/U only. An individual investigation in the laboratory or library or both, under the supervision of the instructor. Credit hours and other contractual terms are to be determined by student/instructor agreement.

PHY 4930 Physics Seminar (1) AS PHY PR: Senior or advanced junior standing or CC. S/U only. All undergraduate physics majors must enroll in this course at least once. Regular attendance is required. This course introduces students to the research areas in the Physics Department.

PHY 4936 Selected Topics in Physics (1-4) AS PHY PR: Senior or advanced junior standing and CC. Each topic is a course in directed study and under the supervision of a faculty member.

PHY 5720C Electronics for Research (3) AS PHY PR: CI. A rigorous introduction to the fundamentals of analog and digital electronic techniques and to basic instrumentation. Course introduces practical use of diodes, transistors, analog and digital ICs, breadboarding techniques and electronic test instrumentation. Spring Semester.

PHY 5937 Selected Topics in Physics (1-4) AS PHY PR: Senior or advanced standing and CC. Each topic is a course in directed study under the supervision of a faculty member.

PHY 2101 Mathematical Analysis of Problems in Mechanics and Electricity (2) AS PHY PR: PHY 2053 and PHY 2054, MAC 2283 or MAC 2313. Designed for students who have not had the general physics sequence using calculus. Review of mechanics and electricity emphasizing problems which use calculus.

PHY 2102 Problems in General Physics I (1) AS PHY CR: PHY 2053. A course designed to help students develop problem-solving skills for PHY 2053.

PHY 2103 Problems in General Physics II (1) AS PHY CR: PHY 2054. A course designed to help students develop problem-solving skills for PHY 2054.

PHY 5115 Methods of Theoretical Physics I (3) AS PHY PR: MAP 2302 or CI. Applications of mathematical techniques to classical and modern physics. Vector spaces including Hilbert space, orthogonal functions, generalized functions, Fourier analysis, transmutation calculus, and variational calculus.

PHY 5116 Methods of Theoretical Physics II (3) AS PHY PR: MAP 2302 or CI. Applications of mathematical techniques to classical and modern physics. Selected topics in complex analysis, differential and integral equations, numerical methods, and probability theory.

PHY 5304 Nuclear Physics (3) AS PHY PR: PHY 4604 or CI. Spring Semester. Nuclear forces, nuclear models, nuclear structure, decay, nuclear reactions, and high energy physics.

PHY 5405 Solid State Physics I (3) AS PHY PR: PHY 3101, MAP 2302, CI. Crystal structure, x-ray and electron diffraction, mechanical and thermal properties of solids, electrical and magnetic properties of metals, band theory of metals, insulators, and semiconductors. First semester of sequence PHY 5405, PHY 6426.

PHY 5505 Plasma Physics (3) AS PHY PR: PHY 4324 or CI. Fall Semester. Introduction to Boltzmann, magnetohydrodynamic, and orbit approaches to plasmas. Longitudinal and electromagnetic waves in plasmas. Collisions and radiation, instabilities.


POL 1120L Beginning Polish I Laboratory (1) AS MLL CR: POL 1120. Concurrent enrollment with a lecture session is required, and, if dropped, then dropped simultaneously. S/U only. A laboratory designed to offer additional practice using various instructional technologies and media.

POL 1121 Beginning Polish II (4) AS MLL PR: POL 1120L or equivalent. CR: POL 1121L. This course continues the four basic skills of POL 1120, with continued emphasis on
This course examines some of the major issues involving environmental law. Specially, the course provides a survey and analysis of statutes, both state and federal, regulating water, air, soil pollution, and resource conservation and recovery. The course will also address questions pertaining to problems of implementation, interpretation, enforcement, and development of environmental laws.

POS 3713 Empirical Political Analysis (3) AS POL
Fundamentals of empirical political inquiry: systematic data collection and quantitative analysis techniques. Laboratory exercises using the computer are required.

POS 3931 Selected Topics (3) AS POL
Selected topics in political science with course content based upon student demand and instructor's interest.

POS 4204 Political Behavior, Public Opinion, and Elections (3) AS POL
Analysis of economic and socio-psychological factors influencing mass and elite political behavior; voting behavior, public opinion, and political activism.

POS 4413 The American Presidency 6A (3) AS POL
The presidency as a political institution; analysis of powers; legislative, administrative, political, and foreign policy leadership; crisis management and decision making; White House staffing; limits on power.

POS 4424 The American Congress (3) AS POL
Organization, procedures, committee system, party leadership, relations with governmental and non-governmental organizations and agencies, oversight, decision-making processes, House/Senate comparison.

POS 4614 Constitutional Law I (3) AS POL
PR: POS 2041. Leading social problems, principle institutions, and the scope of powers. Analysis of Supreme Court decisions, scholarly commentary, and the writings of leading public figures.

POS 4624 Constitutional Law II (3) AS POL
PR: POS 2041. Analysis of Supreme Court decisions and scholarly commentaries on the constitutional rights of individuals.

POS 4693 Women and Law I (3) AS WST
Introduction to issues concerning the legal aspects of sex and sex-based discrimination as embodied in statutory and case law, focusing on constitutional and family law and reproductive freedom issues. May also be taken for credit in Women's Studies.

POS 4694 Women and Law II 6A MW (3) AS WST
PR: POS 4693 or CI. Legal position of women in American society and remedies available to challenge current laws and practices, with specific emphasis on employment and education issues as they relate to both women and men. May also be taken for credit in Women's Studies.

POS 4905 Independent Study (1-3) AS POL
PR: 3.0 average in Political Science and CI. S/U only. Specialized study determined by the student's needs and interests.

POS 4910 Individual Research (1-3) AS POL
PR: 3.0 average in Political Science and CI. Investigation of some aspect of political science culminating in the preparation of an original research paper.

POS 4936 Senior Seminar (3) AS POL
PR: Senior standing and CI. An opportunity to work with others in a seminar format, exploring specialized topics.

POS 4941 Field Work (3-15) AS POL
PR: 3.0 average in Political Science and CI. Opportunity for students to obtain practical experience as aides to agencies of government and political parties.

POS 4970 Honor Thesis (3) AS POL
PR: Admission to Honor option. Writing of honor thesis under direction of faculty members.

POS 5094 Issues in American National and State Government (3) AS POL
Selected topics of study in American government.

POS 5155 Issues in Urban Government and Politics (3) AS POL
Selected issues and topics in Urban Government and politics.

POT 3003 Introduction to Political Theory (3) AS POL
Examines various kinds of theories used: in political science for understanding the political life: normative theory, empirical theory, historicism theory, analytical theory, and critical theory.

POT 3013 Classical Political Theory (3) AS POL
Analysis of basic ideas of Plato, Aristotle, Cicero, St. Thomas, and other leading pre-modern political philosophers.

POT 4054 Modern Political Theory (3) AS POL
Analysis of basic political ideas of Machiavelli, Hobbes, Locke, Rousseau, Burke, and other modern philosophers.

POT 4064 Contemporary Political Thought (3) AS POL
Examines various political views and political phenomena in the nineteenth and twentieth centuries. Diverse theoretical types and relevant political phenomena will be presented.

POT 4109 Politics and Literature 6A LW (3) AS POL
Critical examination of the connections between politics and literature.

POT 4204 American Political Thought (3) AS POL
Examines political writings in the U.S. and responses to critical periods in history, beginning with the Founding Fathers, and culminating in recent contributions and understanding contemporary political problems and solutions.

POT 4661 The Politics of Identity, Difference and Inequality MW (3) AS POL
PR: POT 3003. An analysis of how relationships of social identity and difference become the basis of social, political and economic inequality in modern society. It incorporates both contemporary and classical discussions of inequality.

POT 4936 Selected Topics in Political Theory (3) AS POL
Selected topics or thinkers in political philosophy.

POT 5626 Issues in Political Philosophy and Law (3) AS POL
PR: Graduate or senior standing and CI. Selected topics in political philosophy and law.

PPE 4004 Personality (3) AS PSY
PR: PSY 3213 with a grade of C or better or CI. Methods and findings of personality theories and an evaluation of constitutional, biosocial, and psychological determinants of personality.

PSB 4013C Physiological Psychology (3) AS PSY
PR: PSY 3213 with a grade of C or better or CI. Gross neural and physiological components of behavior. Structure and function of the central nervous system and theory of brain functions.

PSY 2012 An Introduction to Contemporary Psychology SS (3) AS PSY
A broad survey of psychology for both majors and non-majors with special emphasis on the more applied areas of psychology (e.g., social psychology, abnormal psychology, personality, and developmental psychology.)

PSY 3044 Experimental Psychology SS (3) AS PSY
PR: PSY 3212, psychology major or CI. Designed as an in-depth examination of the basic principles and concepts of psychological science. Extensive coverage will be given to the areas of learning, perception, physiological psychology, and cognition.

PSY 3213 Research Methods in Psychology (4) AS PSY
PR: PSY 3212 with a grade of C or better, or CI. This course considers the logic of experimental design, concept of control and the analysis of experimentally obtained data. The laboratory section provides experience applying the concepts discussed in lecture. Two lectures plus two-hour lab. May be taken concurrently with PSY 3044.

PSY 4205 Experimental Design and Analysis (3) AS PSY
PR: PSY 3213 with grade of C or better or CI. 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 4510 Supervised Practicum and Field Experience in Applied Behavior Analysis (1-6) AS PSY
Does not count toward major credit (S/U only) Field experience in Behavior Analysis in applied settings. Under the supervision of Certified Behavior Analysts, students design, implement and evaluate behavior analysis services. Includes both field practicum and didactic components. May be repeated for a maximum of 6 hours.

PSY 4604 History and Systems of Psychology (3) AS PSY
PR: PSY 3213 with a grade of C or better or CI. The historical roots of psychological theories, investigation of the various schools of psychology such as behaviorism, Gestalt psychology, psychoanalysis, and phenomenological psychology.

PSY 4913 Directed Study (1-3) AS PSY
PR: CI. S/U only. A maximum of 3 credits of either PSY 4913 or PSY 4970 may count toward the major. The student plans and conducts an individual research project or program of directed readings under the supervision of a faculty member.

PSY 4931 Selected Topics: Seminar (3) AS PSY
PR: Upper-level psychology major and CI. Graduate-type seminar designed to provide the advanced undergraduate student with an in-depth understanding of a selected sub-area within psychology.

PSY 4932 Honors Seminar (3) AS PSY
PR: Admission to honors program in psychology and CI. May not count for major credit. The student, under supervision of a faculty member, will formalize, conduct, analyze, and report in writing a research project in psychology.
PSY 4970 Honors Thesis (1-3) AS PSY
PR: Admission to honors program in psychology and CI. A maximum of 3 credits of either PSY 4913 or PSY 4970 may count toward the major. The student under supervision of a faculty member will formalize, conduct, analyze, and report in writing a research project in psychology.

PUP 4700 Public Relations (3) AS POL
Examines the formation and implementation of public policy in areas such as the economy, health, etc.

PUP 4323 Environmental Politics and Policy (3) AS POL
Examines the politics of environmental issues, formation and implementation of environmental policy.

PUP 5607 Public Policy and Health Care (3) AS POL
The study of health care policy as it relates to the policy process in the American setting.

PUR 3000 Principles of Public Relations (3) AS COM
PR: MMC 2100 and MMC 3602. The underlying theory and professional practice of public relations within corporate and institutional settings and its vital role in society; ethical standards of practice, and relationships of the practice to the public media; public relations problem-solving process.

PUP 4501 Writing for Public Relations (3) AS COM
PR: JOU 2100 and PUR 3000. Techniques for creating effective written public relations communications to achieve organizational goals, including news releases, proposal letters, broadcast scripts, and memos. Exercises based on case study scenarios.

PUP 4401 Public Relations: Issues, Practices and Problems (3) AS COM
PR: PUR 3000. The theory of public relations practice and its application in the real world. The role of the public relations practitioner in business, government, and social institutions, and the nature of specialized areas of the practice. Identification of public issues, analysis of potential impact on organizations and development of strategies to deal with them successfully and responsibly.

PUR 4700 Public Relations Practicum (1) AS COM
PR: Senior standing and CI. For public relations sequence majors. S/U. Practical experience outside the classroom where the student works for academic credit under the supervision of a professional practitioner. Periodic written and oral reports to the faculty member coordinating the study.

PUR 4801 Advanced Public Relations (3) AS COM
PR: PUR 4401, PUR 4100, and MMC 4420. As final course in Public Relations sequence, it involves intensive study of counseling and problem-solving techniques used in professional practice. Analysis of case studies and preparation of complete Public Relations program. Extensive reading in the literature of contemporary practice.

QMB 2100 Business And Economic Statistics I 6A QM (3) BA QMB
PR: MAC 2233. Description of sample data; calculation of probabilities of discrete and continuous random variables; binomial and normal distributions; sampling theory and estimation; test of hypotheses; elements of Bayesian decision theory.

QMB 3200 Business And Economic Statistics II (3) BA QMB
PR: MAC 2233, QMB 2100. Theory and use of statistical inference. Point and interval estimations; criteria for choosing estimators and decision rules; hypotheses tests; analysis of variance; correlation; multiple regression; and nonparametric methods.

QMB 4604 Quantitative Approach for Business Decisions (3) BA QMB
PR: ISM 3431. The use of systematic approaches and management science tools for decision making and problem solving in an organizational context. Emphasis is on quantitative approaches for problem identification, analysis, choice and implementation.

RCS 3030 Rehabilitation Counseling Issues in Alcoholism and Other Addictions (3) AS REH

RCS 5035 Rehabilitation Counseling: Concepts and Applications (3) AS REH
PR: CI. Introduction to the profession of Rehabilitation Counseling and current issues in the field. Coverage includes rehabilitation history, legislation, case management and related services for Americans with disabilities.

RCS 5080 Medical Aspects of Disability (3) AS REH
PR: RCS 5700 or CR A survey of medical conditions and disabilities encountered by rehabilitation and mental health counselors. Examines the relationship of client handicaps, physical and mental, to rehabilitation and mental health programming.

RCS 5404 Foundations of Mental Health Counseling (3) AS REH
PR: CCSA building skill course on the utilization of one's self in mental health counseling relationship. Includes theory of the origin, history, professional functions and current issues in the discipline of mental health counseling.

RCS 5406 Human Growth and Development (3) AS REH
PR: RCS 5700. An overview of human development theory as applied in psychotherapy and case management rehabilitation, mental health, and addiction settings.

RCS 5450 Substance Abuse I (3) AS REH

RCS 5700 Legal, Ethical, Professional Standards and Issues in Counseling (3) AS REH
PR: CC. An overview of all aspects of professional functioning including history, roles, organizational structures, ethics, standards and credentialing. Contemporary and developing issues in the field of professional counseling will be also addressed.

RCS 6015 Practicum I (1) AS REH
PR: Majors Only. Must be taken concurrently with RCS 5406. S/U. Supervised experience and practice in counseling in various rehabilitation and mental health settings for a minimum of 120 hours.

RCS 5905 Directed Studies (3) AS REH
PR: CI Supervised rehabilitation studies under the direction of a faculty member.

REA 1105 Advanced Reading (3) AS ENG
Will not be counted toward the English major. Designed to help students develop maximum reading efficiency. The course includes extensive instruction and laboratory practice in the improvement of adequate rates of reading, vocabulary, and comprehension skills. An independent study approach is also available for students who prefer to assume responsibility for their own progress.

REA 1605 Learning Strategies Within Academic Disciplines (2) AS ENG
Will not be counted toward the English major. A practical course in rapid vocabulary improvement for students in all areas. Stress is on words in context.

RED 4310 Early Literacy Learning (3) ED EDE
PR: Admission to College of Education. Prepares preservice teachers to understand the foundations of literacy and the learning principles and instructional strategies necessary to provide literacy instruction to emergent, novice, and transitional readers and writers.

RED 4511 Literacy in the Intermediate and Middle Grades (3) ED EDE
PR: RED 4310. Prepares preservice teachers to facilitate literacy learning for students who are beyond the primary grades. Students will develop an understanding of instructional strategies and materials appropriate for remedial, multicultural, and mainstream students ways to promote literacy development across the curriculum, and theories of reading disabilities.

REE 3043 Real Estate Decision Making (3) BA FIN
PR: FIN 3403. Acquaints students with the range of knowledge required to engage in real estate decision-making in the United States. Integrates the multiphase framework within which decision making are made, the elements of financial analysis, deal structuring, and marketing, and the pricing, financing and allocation of real property in the real estate markets.

REE 3033 Real Estate Investment Analysis (3) BA FIN
PR: FIN 4504. A comprehensive study of the determinants of the market and financial feasibility of the real estate investment decision. The development of market and site analyses, theories of urban development, patterns, and the role of taxation will be studied along with the application of analytical techniques for decision making.

REL 2210 Hebrew Bible/Old Testament (4) AS REL
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 2240 Introduction to the New Testament (3) AS REL
An introduction to the critical study of the New Testament in context of Christian beginnings in the first century A.D.

REL 2300 Introduction to World Religions 6A HP (4) AS REL
A cross-cultural exploration of the major religions of the world
through lectures, films, and the reading of key religious texts. Religions covered include Judaism, Christianity, Islam, Taoism, Confucianism, Hinduism, and Buddhism.

**REL 2306 Contemporary World Religions** HP (4) AS REL
This course will explore the unity and diversity of religious traditions in the modern world in order to understand the mutual interactions between religions and cultures. Emphasis will be placed on the role of religions in shaping human values which can either create or resolve social conflicts, and the impact these values can have on issues of race, ethnicity and religious diversity in a multicultural world.

**REL 3000 Ancient Religions in Context** (4) AS REL
Study of the religions in their cultural setting of the peoples of the Ancient Near East and Mediterranean.

**REL 3003 Introduction to Religion** (3) AS REL
This course examines the phenomenon of religion to answer the question: Religion, what is it? Religious thought (mythology and theology) and religious behavior (ritual and morality) are closely examined from a variety of methodological perspectives.

**REL 3111 The Religious Quest in Contemporary Films** 6A SS HP (4) AS REL
This course will use contemporary films such as Gandhi, Malcolm X, the Long Walk Home, the Color Purple, The Chosen, and Grand Canyon, to explore the personal and social dimensions of religion in modern secular societies, with an emphasis on issues of racism, sexism and human liberation and reconciliation.

**REL 3120 Religion in America** (3) AS REL
Treats the transition from state church to pluralism in American religious institutions, the religious consequences of non-Protestant immigration; the Jewish factor; the effect of home missions and social concerns programs upon American life; political entanglements and the concept of church/state separation.

**REL 3131 New Religions in America** (3) AS REL
A course designed to allow the student to survey the wide spectrum of contemporary sects and cults in America and learn what motivates their development.

**REL 3132 Witchcraft and Paganism in America** (3) AS REL
A study of contemporary witchcraft and paganism, including theories, methods, history, myths and symbols, beliefs, rituals and practices, believers, recruitment, socialization, and organizations.

**REL 3140 Religion, Culture, and Society** (3) AS REL
Introductory scholarly survey of religion in its complex relationship to culture and society, including definitions and theories of religion, research methods, becoming religious, social organization, and interconnections with other social institutions. Open to non majors.

**REL 3145 Women and Religion** 6A MW (3) AS REL
Analysis of the status and roles of women as compared to men in the Judeo-Christian tradition. Contemporary issues of feminism and religion, and controversies surrounding them.

**REL 3155 Life After Death** 6A MW (3) AS REL
An exploration of ideas about life after death and its relations to this life in Judaism, Christianity, Islam, Hinduism, and Buddhism.

**REL 3170 Religion, Ethics and Society Through Film** 6A SS HP (4) AS REL
An analytic study of contemporary social issues through contemporary films such as Wall Street and Crimes and Misdemeanors, drawing on religious narrative traditions from Eastern and Western cultures which have contributed to the development of an ethic of human dignity, human rights and human liberation after Auschwitz and Hiroshima.

**REL 3200 Biblical Archeology** MW (3) AS REL
An in-depth examination of the archaeological data relating to the background and content of the Bible, including ancient customs, Biblical sites and cities, Biblical history, and material culture of the Biblical period. Special attention will also be given to the documentation and verification of archaeological evidence.

**REL 3303 Comparative Religion: Judaism and Islam** MW (3) AS REL
This course is framed within the academic study of religion, and it doesn't concern itself with contemporary political difference in the Middle East. It treats as Islamic historical statements of the Qu'ran and related traditions, and as Judaism the authoritative statements of the Torah, oral and written.

**REL 3310 World Religions** (3) AS REL
A comparative study of the literature and institutions of the major religions of the world including Judaism, Christianity, Islam from the Near East and Hinduism, Taoism, Confucianism, and Buddhism from the Far East. General comparison of Western and Eastern beliefs.

**REL 3330 The Religions of India** AF (3) AS REL
All religions of the world came to India and all became Indian. What is this "Indianness" which stems from Hinduism, Buddhism, Jainism and Sikhism, but extended itself to include Judaism, Christianity, Islam, Zoroastrianism and Baha'i. Readings from classical texts and modern literature.

**REL 3362 Introduction to Islam** 6A HP AF (3) AS REL
This course is designed to introduce students to the basics of Islam and its history and culture, with emphasis on the role of Islam in its historical context in the Middle East, and stressing issues of diversity (including ethnicity and gender).

**REL 3367 Islam in the Modern World** 6A HP AF (3) AS REL
Examines the major developments in Islamic thought since the 13th century, with emphasis on the 19th and 20th century Islamic resurgence. Issues of diversity, gender, and social values will be stressed.

**REL 3375 Issues in Caribbean Religions** MW (3) AS REL
This course concentrates on major social and cultural issues in Caribbean religions mainly in Cuba, Haiti, Jamaica, and Trinidad, with emphasis on African-derived religions and Western and Eastern religious encounters.

**REL 3380 Native American Religions** (3) AS REL
Introduction to and survey of Native American Religions. A variety of multiplicity of perspectives, including anthropological, historical, social psychological, sociological, and philosophical.

**REL 3420 Contemporary Religious Thought** (3) AS REL
An examination of the central ideas of recent religious thinkers; such as Gandhi, Martin Luther King, Jr., Elie Wiesel, Thich Nhat Hanh, and John D. Caputo.

**REL 3465 Religion and the Meaning of Life** MW (3) AS REL
What is the meaning of life? An exploration of answers to this question in Eastern and Western religions, and in humanistic philosophies of life.

**REL 3501 History of Christianity** 6A HP (4) AS REL
Historical development of Christianity, its ideas and institutions, from the first century to the rise of religious modernism in the 19th century.

**REL 3561 Roman Catholicism** 6A MW (3) AS REL
An examination of the history, doctrine, and ethics of the Roman Catholic Church.

**REL 3600 Introduction to Judaism** 6A SS HP AF (3) AS REL
Introduction to Judaism: its religious tenets; its codes of ethics; its rites and customs. This course is intended as a description of what it means to be a Jew.

**REL 3602 Classics of Judaism** 6A MW (3) AS REL
A study of the evolution of the religion of ancient Israel from the Exodus to the end of the second century of our era, seen against the background of its historical, geographical, political, social and spiritual setting.

**REL 3613 Modern Judaism** 6A MW LW (3) AS REL
A study of Jewish life in the West since 1789, emphasizing Jewish beliefs, practices, and institutions.

**REL 3801 History of Writing** (2) AS REL
Study, in reasonable detail, of the history and evolution of writing with emphasis on the societal conditions that stimulate the development of writing. Mesopotamia, Egypt, and the Mediterranean World, looking at the transition from oral to written language and its impact on religion.

**REL 3900 Directed Readings** (1-4) AS REL
Prerequisites: Individual guidance in concentrated reading on a selected topic.

**REL 3936 Selected Topics** (1-4) AS REL
Course contents depend on students’ needs.

**REL 4113 The Hero and Religion** 6A MW (3) AS REL
A study of the way in which embedded religious models help to fashion the representation of an heroic protagonist. The focus of the course will be on the relationship between the hero and the other, as differentiated by race, gender, ethnicity, or merely inner being.

**REL 4133 Mormonism in America** MW (3) AS REL
A study of Mormonism in America as an example of a new religion. Includes the study of history, myths and symbols, texts, beliefs, religious organizations and institutions.

**REL 4160 Egyptian Religions** (3) AS REL
Study of the Ancient Egyptian religions as reflected in the art and artifacts, language, literature, and culture (alternate years) of both kingdoms.

**REL 4161 Religion, Technology and Society** (3) AS REL
An exploration of the way in which religion and technology have interacted in Western civilization so as to both express and transform human values and identity. Special emphasis will be given
REL 4717 Comparative Religious Ethics 6A MW LW (4) AS REL
A comparative study of religious ethics emphasizing how 20th century social activists, such as Gandhi and M. L. King Jr. and eco-feminists such as Rosemary Ruether and Joanna Macy, have drawn upon and transformed traditional religious stories and spiritual practices in order to create cross-cultural and inter-religious ethic for a multi-cultural world.

REL 4193 Comparative Mysticism (4) AS REL
A course designed to acquaint the student with the nature of mystical experience, and some of the varieties of mystical experience recorded in the writings.

REL 4221 Who Wrote the Bible (Genesis-Kings) 6A MW LW (4) AS REL
A critical examination of Genesis through 2 Kings. This course focuses on the history of the formation of the text and the development of the religious traditions represented therein. Special attention will be paid to Israelite Law, Covenant Theology, and the history of the religion(s) of the Children of Israel in their Ancient Near Eastern context.

REL 4250 Jesus’ Life and Teachings (4) AS REL
An examination of the various historical studies made in the quest of identifying Jesus as an historical figure. The concern is to make a meaningful statement of what Jesus was and what he was saying to the Jews in Palestine at the beginning of the common era.

REL 4333 Hinduism (4) AS REL
The philosophy of the samsas; the complex rituals of the Brahmins; the art of its temples; the psychology and physiology of yoga; the social rigidity of the caste system; the esoteric science of meditation; the ascetic activism of Mahatma Gandhi—all of these are Hinduism, and more. Close readings of classical texts, philosophical systems and medieval literature.

REL 4343 Buddhism in India, Sri Lanka, and South East Asia (4) AS REL
The life and teachings of the Buddha; the order of monks and nuns; the Buddhist Emperor Ashoka; schisms; the rise of the Great Vehicle and the philosophy of emptiness; Buddhist art and culture; Buddhism and national liberation; contemporary social and political issues.

REL 4344 Buddhism in China, Japan, and Tibet (4) AS REL
Mahayana Buddhism followed the silk routes to China and Japan, and later it crossed the Himalayas into Tibet. An overview of the variety of schools and practices of Buddhism and its adaptation by the local cultures in China, Japan, and Tibet.

REL 4626 Reason in Religion: Talmudic Logic MW (3) AS REL
Analyzes the modes of thought and of logical analysis of the Talmud of Babaynonia; the way in which applied logic and practical reasoning work in a religious definition of the social order; the dialectical argumentation.

REL 4670 Judaism and Christianity After the Holocaust 6A MW LW (4) AS REL
This course will explore the impact of the Holocaust on Jewish and Christian thought and identity in the light of the history of religious and cultural anti-Semitism in Western civilization.

REL 4910 Undergraduate Research (1-4) AS REL
PR: Junior standing and CI. Individual investigations with faculty supervision.

REL 4930 Selected Topics (3) AS REL
Course contents depend on student demand and instructor's interest and may range over the whole field of Ancient Religions. Offered on a regular basis exclude the Bible as History 3.

REL 4931 Seminar in Religion (3) AS REL
PR: Majors and minors only or CI. A course required for Religious Studies majors and minors, whose prior religious studies have prepared them for a cooperative creative and/or research effort in the area of religious studies.

REL 4936 Selected Topics (1-4) AS REL
PR: Junior standing. Individual investigations with faculty supervision.

REL 4939 The Development of Religious Studies (3) AS REL
Course designed for senior majors and minors in religious studies. Discussion of key figures and methodological advances in the development of the field from the 18th century to present, with an emphasis on issues of race and gender and of violence and non-violence.

RMI 3011 Principles of Insurance (3) BA FIN
Analysis of insurable risks of both business and individuals. An examination of the characteristics of those areas of risk and uncertainty where the mechanisms of insurance are effective alternatives. The concept, contracts, and institutions involved in insurance are examined in relationship to the socio-economic environment.

RMI 4210 Property Insurance (3) BA FIN
PR: RMI 3011. Course dealing with recognition of personal and business property risks, and coverage which may be used in dealing with these risks. Consider the underlying, marketing, and social problems associated with these coverages. Topics include commercial and residential fire insurance, inland marine and transportation coverages, and multiperil contracts. Not limited to Finance majors.

RMI 4211 Casualty Insurance (3) BA FIN
PR: RMI 3011. Course dealing with recognition of personal and business casualty risks and coverages which may be used in dealing with these risks. Considers the underlying, marketing, and social problems associated with these coverages. Topics include workers' compensation, public liability, automotive liability, suretyship and crime insurances. Not limited to Finance majors.

RTV 2100 Writing For Radio and TV (3) AS COM
PR: ENG 3310 or Consent of RTV 3001. The art and practice of script writing for radio and television.

RTV 3001 Introduction to Telecommunications (3) AS COM
PR: MMC 2100 and MMC 3602. A survey of the organization, structure, and function of the broadcasting industry.

RTV 3301 Broadcast News (3) AS COM
PR: MMC 3602 and MMC 2100. Methods in gathering, writing, and editing newscasts for radio and television.

RTV 3444 Radio Practicum (1) AS COM
PR: RTV 3001 and CI. For telecommunications sequence majors. S/U only. Practical experience outside the classroom where the student works for academic credit under the supervision of a professional practitioner. Periodic written and oral reports to the faculty member coordinating the study.

RTV 4420 TV Production and Direction (3) AS COM
PR: RTV 3001 and RTV 3304. A basic course in the techniques of producing and directing TV programs.

RTV 4470 Electronic Field Production (3) AS COM
PR: RTV 3001 and RTV 3304. Advanced producing, scripting, lighting, camera, and editing for video and news production. Introduction to computer editing and graphics.

RTV 4500 Telecommunications Programming (3) AS COM

RTV 4700 Telecommunications Law and Policy (3) AS COM
PR: for broadcast news option: RTV 3001, RTV 3304, MMC 4200, POS 2112 or POS 3142; for programming option: RTV 3001, RTV 4700, RTV 2100 or RTV 3304. Senior Standing. A study of the electronic media from the perspective of governmental regulation and the political process with special emphasis on how regulatory policy is determined.

RTV 4942 TV Practicum (1) AS COM
PR: RTV 4420 and CI. For telecommunications sequence majors. S/U only. Practical experience outside the classroom where the student works for academic credit under the supervision of a professional practitioner. Periodic written and oral reports to the faculty member coordinating the study.

RUS 1120 Beginning Russian Laboratory (1) AS MLL
CR: RUS 1120L. The first course in the study of elementary Russian. Emphasis on the development of basic skills in comprehension, speaking and reading.

RUS 1121 Beginning Russian Laboratory (1) AS MLL
CR: RUS 1121L. Beginning Russian II Laboratory (1) AS MLL
CR: RUS 1121. Concurrent enrollment with a lecture session is required, and, if dropped, then dropped simultaneously. S/U only. A laboratory designed to offer additional practice using various instructional technologies and contexts.

RUS 1122 Beginning Russian Laboratory (1) AS MLL
CR: RUS 1122L. Beginning Russian II Laboratory (1) AS MLL
CR: RUS 1122. Concurrent enrollment with a lecture session is required, and, if dropped, then dropped simultaneously. S/U only. A laboratory designed to offer additional practice using various instructional technologies and contexts.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>RUS 2200</td>
<td>Russian III (4) AS MLL</td>
<td>PR: First year or equivalent. Review and development of basic skills in conversation, composition, and reading.</td>
</tr>
<tr>
<td>RUS 2201</td>
<td>Russian IV (4) AS MLL</td>
<td>PR: RUS 2200 or equivalent. Review and development of basic skills in conversation, composition, and reading.</td>
</tr>
<tr>
<td>RUS 2370</td>
<td>Overseas Study (1-6) AS MLL</td>
<td>Intensive study of the Russian language in Russia involving at least 20 hours per week of classroom instruction and cultural excursions conducted in Russian around Moscow and other parts of Russia.</td>
</tr>
<tr>
<td>RUS 3470</td>
<td>Conversation I (4) AS MLL</td>
<td>PR: Second year or equivalent. Development of basic conversational skills.</td>
</tr>
<tr>
<td>RUS 3480</td>
<td>Conversation II (4) AS MLL</td>
<td>PR: Previous course in series or equivalent. Development of conversational skills.</td>
</tr>
<tr>
<td>RUS 4402</td>
<td>Advanced Russian Conversation &amp; Composition I (4) AS MLL</td>
<td>PR: RUS 4241 or Cl. Third year Russian.</td>
</tr>
<tr>
<td>RUS 4403</td>
<td>Advanced Russian Conversation &amp; Composition II (4) AS MLL</td>
<td>PR: RUS 4241 or Cl. Third year Russian.</td>
</tr>
<tr>
<td>RUT 3110</td>
<td>Russian Classics in English 6A MW LW (3) AS MLL</td>
<td>Masterpieces of 18th century Russian literature in English. the major works of Pushkin, Lermontov, Gogol, Turgeney, Dostoevsky, Tolstoy, and Chekhov. Elective for all students in all departments.</td>
</tr>
<tr>
<td>RUT 3111</td>
<td>Twentieth-Century Russian Literature in English 6A MW LW (3) AS MLL</td>
<td>Masterpieces of 20th century Soviet literature in English. the major works of Bely, Olesha, Babel, Zamyatin, Bulgakov, Pasternak, and Solzhenitsyn. Elective for all students in all departments.</td>
</tr>
<tr>
<td>SCE 4237</td>
<td>Science, Technology, Society Interaction 6A MW (5) ED EN</td>
<td>Achieve a historical and philosophical understanding of (1) the nature of the scientific enterprise: interaction of science, technology, and society (STS), (2) how to teach STS including the use of computers and related technologies, and (3) intricacies of sample STS topics.</td>
</tr>
<tr>
<td>SCE 4305</td>
<td>Communication Skills in the Science Classroom (2) ED EDN</td>
<td>Reading and communication skills important in understanding scientific literature and communicating findings to others.</td>
</tr>
<tr>
<td>SCE 4310</td>
<td>Teaching Elementary School Science (3) ED EDE</td>
<td>PR: Admission to College of Education and completion of General Distribution Requirements in the Natural Science area. Techniques and materials of instruction in the elementary school.</td>
</tr>
<tr>
<td>SCE 4320</td>
<td>Teaching Methods in Middle Grade Science (3) ED EDN</td>
<td>PR: Completion of 25 semester hours of Science or CC. Not designed for high school teachers. Survey techniques and materials unique to science, grades 5-9.</td>
</tr>
<tr>
<td>SCE 4330</td>
<td>Teaching Methods in the Secondary School-Sciences (3) ED EDN</td>
<td>PR: Completion of 25 hours in approved science areas, EDG 4620 or CC. Techniques and materials of instruction in secondary school sciences.</td>
</tr>
<tr>
<td>SCE 4396</td>
<td>Senior Seminar in Science Education (2) ED EDN</td>
<td>PR: Senior standing; CR: SCE 4940. Synthesis of teacher candidate's knowledge, skills, and understanding in upper level college program.</td>
</tr>
<tr>
<td>SCE 4940</td>
<td>Internship: Science Education I (1-12) ED EDN</td>
<td>CR: SCE 4936. One full semester of internship in a public or private school.</td>
</tr>
<tr>
<td>SCE 5937</td>
<td>Selected Topics in Science Education (1-4) ED EDN</td>
<td>PR: DPR. Study of student personnel services in institutions of higher education. Identification of the needs of students and of the ways to respond to meet these needs. Survey of service units on a campus in terms of structure, organization, funding, etc.</td>
</tr>
<tr>
<td>SLS 1101</td>
<td>The University Experience (2) ED EDN</td>
<td>PR: Freshman only. An extended introduction to USF. Topics include purposes of higher education, structures and administration of USF, career planning, selecting a major, study skills, managing time, academic advising, computer resources, and decision-making.</td>
</tr>
<tr>
<td>SLS 2401</td>
<td>Career Development Process (2) ED EDN</td>
<td>Students will study vocational choice theories and participate in career decision processes. Development of self-awareness and knowledge of career opportunities and requirements necessary for decision making. Available to lower level majors or non-majors.</td>
</tr>
<tr>
<td>SOP 3742</td>
<td>Psychology of Women SS (3) AS WST</td>
<td>An examination of theories of female personality in historical perspective. Current research on sex differences, socialization, sexuality, psychology of reproduction. Emerging roles of women as related to social change and developmental tasks of the life cycle.</td>
</tr>
<tr>
<td>SOP 4004</td>
<td>Social Psychology (3) AS PSY</td>
<td>PR: PSY 3213 with a grade of C or better or Cl. Survey of methods, empirical findings, and theoretical interpretations in the study of an individual's behavior as it is affected by others.</td>
</tr>
<tr>
<td>SOP 4714C</td>
<td>Environmental Psychology (3) AS PSY</td>
<td>PR: PSY 3213 with a grade of C or better or Cl. Explores the influences of environment on behavior. Topics considered include crowding, privacy, territorial behavior, environmental design, and pollution effects. Designed for both psychology majors and non-majors.</td>
</tr>
<tr>
<td>SOW 3101</td>
<td>Human Behavior and the Social Environment I (4) AS SOK</td>
<td>PR: All pre-core courses. Restricted to Social Work majors, others by School permission. An integrating human behavior-social environment course emphasizing dynamics of behavior and environmental factors as they relate to social work practice with individuals, groups, families, and communities.</td>
</tr>
<tr>
<td>SOW 3102</td>
<td>Human Behavior And The Social Environment II (4) AS SOK</td>
<td>PR: SOW 3101, SOW 3401, SOW 4341. Restricted to Social Work majors; others by School permission. An integrating course emphasizing dynamics of behavior and environmental factors as they relate to social work practice with families, groups, organizations and communities.</td>
</tr>
<tr>
<td>SOW 3203</td>
<td>The American Social Welfare System SS (3) AS SOK</td>
<td>A general education introductory course which provides students with a framework for understanding the historical development of American social welfare, its value base, and its response to social problems in families, organizations and communities.</td>
</tr>
<tr>
<td>SOW 3401</td>
<td>Research and Statistics For Social Work (4) AS SOK</td>
<td>PR: All pre-core courses. Restricted to Social Work majors, others by School permission. The purpose of this course is twofold: to familiarize the student with research as it is practiced in the profession of Social Work; and to equip the student with those theoretical understandings necessary to be a critical consumer of social work research.</td>
</tr>
<tr>
<td>SOW 4233</td>
<td>Social Welfare: Policy &amp; Program (4) AS SOK</td>
<td>PR: All pre-core courses, SOW 3101, SOW 3401, SOW 4341. Restricted to Social Work majors, others by School permission. An advanced course which synthesizes policy and program content in an analytical approach to contemporary social welfare policy issues and current social welfare programs.</td>
</tr>
<tr>
<td>SOW 4341</td>
<td>Multi-Methods of Social Work Practice I: Micro-System Intervention (5) AS SOK</td>
<td>PR: or CR: SOW 3101; SOW 3401. Restricted to Social Work majors; others by School permission. First practice course emphasizing development of skills and investigative methods with individuals, families and small groups. Course includes both didactic and experiential learning components.</td>
</tr>
<tr>
<td>SOW 4343</td>
<td>Multi-Methods of Social Work Practice II: Macro-System Intervention (5) AS SOK</td>
<td>PR: All pre-core courses, SOW 3101, SOW 3401, SOW 4341; must be taken as PR. CR: SOW 4233, and SOW 3102. Restricted to Social Work majors, others by School permission. Second practice course</td>
</tr>
</tbody>
</table>
emphasizing intervention at the community and organizational level. Builds upon theoretical and practical content of SOW 4341. Course includes both didactic and experiential learning components.

SOW 4510 Integrative Seminar (3) AS CSD
PR: SOW 3302, SOW 3203, SOW 3101, SOW 3401, SOW 4341, SOW 3102, SOW 4233, SOW 4343. CR: SOW 4233 and SOW 4510L. Restricted to Social Work majors in senior year. Integrates content and theory from core classes with practice experiences students have in field placement.

SOW 4510L Field Placement (6) AS SOK
PR: SOW 3302, SOW 3203, SOW 3101, SOW 4011, SOW 4341, SOW 3102, SOW 4522, SOW 4233, SOW 4343. CR: SOW 4233 and SOW 4510. S/U only. Supervised field placement in a social welfare organization consisting of 32 hours per week in the field with a total of 480 clock hours per semester.

SOW 4522 Senior Seminar: Multicultural America (3) AS SOK
PR: SOW 3203, SOW 3302, SOW 3101, SOW 4341. The course focuses on the students’ understanding of multicultural and intergenerational issues.

SOW 4900 Directed Readings (1-9) AS SOK
PR: Completion of four social work courses including SOW 3401, upper level standing, and School permission. Content dependent upon student interest and ability. A contract will be jointly developed by student and instructor specifying nature of work to be completed.

SOW 4910 Directed Research (1-6) AS SOK
PR: Completion of four social work courses including SOW 3401, upper level standing and school permission. Majors only. Directed Research is intended to provide students with research experience in areas of specific interest in social work. A contract will be developed between student and instructor specifying nature of work to be completed.

SOW 4930 Variable Topics in Social Work (1-3) AS SOK
Restricted to Social Work majors; others by School permission. Variable title courses to expand on the four sequence areas in the Social Work core curriculum. Allows focus on areas relevant to student’s educational interest.

SOW 5930C Variable Topics in Social Work (1-4) AS SOK
PR: CC Restricted to Social Work majors, both graduate and undergraduate; others by School permission. Course is taken as an elective. Various title course will selectively expand specific social work content areas.

SPA 3002 Introduction to Disorders of Speech and Language SS (3) AS CSD
PR: Junior standing and DPR. The scope of speech-language pathology as a profession and a field of study. An introduction to speech and language disorders, etiologies, major treatment approaches, and research findings.

SPA 3004 Intro to Language Development and Disorders (3) AS CSD
PR: SPA 3002, SPA 3112 or DPR. This course introduces theoretical concepts, and research findings concerning the normal developmental process of language learning and the basis for differentiating developmental delay or disorder of language.

SPA 3011 Introduction to Speech Science (3) AS CSD
PR: SPA 3030, SPA 3101 and SPA 3112. Concentrated study of the acoustic, physiological and perceptual aspects of sound as related to normal and pathological speech communication. Introduction to instrumentation and measurement procedures.

SPA 3030 Introduction to Hearing Science (3) AS CSD
PR: Junior standing, SPA 3101, SPA 3112, SPA 3310. Introduction to the field of hearing including: physics of sound, auditory anatomy and physiology, and psychophysics of hearing.

SPA 3101 Anatomy and Physiology of the Speech and Hearing Mechanism (3) AS CSD
PR: Junior standing. The neurological and anatomical basis of communication disorders. Comparisons of normal and pathological organic structures and their functional dynamics.

SPA 3112 Applied Phonetics in Communication Disorders (3) AS CSD
PR: Junior standing. Introduction to phonetic analysis of normal and disordered speech, including extensive training in transcription using the International Phonetic Alphabet.

SPA 3210 Introduction to Disorders of Hearing (3) AS CSD
PR: SPA 3030 and SPA 3101. The etiology, pathology, and management of disorders of the outer ear, middle ear, inner ear, retrocochlear, and central auditory systems.

SPA 3312 Basic American Sign Language (4) AS CSD
PR: DPR. Introduction to American Sign Language (ASL) as used in the deaf community. General discussion of ASL structure and introduction to various manual communication systems and philosophies. Emphasis on building a basic vocabulary. One hour of laboratory course work is included. Open to all majors.

SPA 3653 Overview of Language Learning in Deaf Children (3) AS CSD
PR: Admission to ISI Program. CR: SPA 3653L. This course is restricted to majors only. Overview of language development of deaf children from infancy through young adulthood, including various theories of language development in the deaf and communication/language of the deaf assessment techniques, and interpreting skills relating to learning processes.

SPA 3653L Overview of Language Learning in Deaf Children Lab (1) AS CSD
PR: Admission to ISI Program. CR: SPA 3653. This course in restricted to majors only. An exploration and overview of communication modes and language used in public school settings by deaf children includes a study of how systems overlap and a development of flexibility in using different modes and languages, and the implications for interpreters.

SPA 3680 Introduction to Interpreting in Public Schools (3) AS CSD
PR: Admission to ISI Program. CR: SPA 3660L. This course is designed for ISI majors but may be elected by non-majors. This course introduces the overview of the roles and responsibilities of interpreters for the deaf working in public school classes grades K - 12 and the overview of historical and current public school practices in educational interpreting in the U.S.

SPA 3680L Introduction to Interpreting in Public Schools Lab (1) AS CSD
PR: Admission to ISI Program. CR: SPA 3660. The lab assists students in assessing and improving their interpreting and transliterating skills through videotapes of simulated interpreting assignments.

SPA 3673 Introduction to Auditory Functions (3) AS CSD
PR: Admission to ISI Program. This course is restricted to majors. An overview of hearing science and speech science relating to the educational environment. This course orient students to the variables prevalent in oral-aural communication among children who have hearing impairment. It addresses techniques and methods of hearing measurement and amplification of sound as well as the interpreter’s role in audiological evaluation and speech language therapy.

SPA 4000 Communication Disorders in the Public Schools (3) AS CSD
PR: DPR. (Non-major course only). An examination of the speech, language and hearing problems affecting school-age children and the classroom teacher’s role in the detection, prevention and amelioration of communication disorders.

SPA 4050 Introduction to the Clinical Process MW (3) AS CSD
PR: SPA 3004 and SPA 3310. Observation and participation in speech-language pathology and audiology practicum in the University’s clinical laboratory. Ethical issues, multicultural concerns, and creativity are stressed through clinical and practical projects.

SPA 4301 Phonological Development and Disorders (3) AS CSD
PR: SPA 3004, SPA 3111. An examination of normal and deviant articulatory and phonological acquisition and behavior. Presentation of current theoretical orientations and the therapeutic principles based upon them.

SPA 4210 Vocal Disorders (3) AS CSD
PR: SPA 3011 and SPA 3310. A comprehensive study of the medical and physical aspects of voice disorders. Differential diagnosis, principles of therapeutic intervention, and procedures for children and adults will be stressed.

SPA 4222 Fluency Disorders (3) AS CSD
PR: SPA 4201. A comprehensive study of disfluent speech behavior. Differential diagnosis, principles of therapeutic intervention, and procedures for children and adults will be studied. Major theories and models of the development and origin of stuttering are also presented.

SPA 4331 Fundamentals of Fingerspelling (2) AS CSD
PR: DPR. A concentrated study of technique in fingerspelling emphasizing clarity and rhythm in expression as well as receptive understanding.

SPA 4335 Sign Language Codes (3) AS CSD
PR: DPR. A review of the sign systems (SEE, SEE II, L.O.V.E., and Signed English) used to code messages through the use of sign. The student will have the opportunity to practice one of the sign systems.

SPA 4455 Counseling of Communicatively Handicapped and Family (3) AS CSD
PR: SPA 3011 and SPA 3310. Discussion of role of counseling in the treatment of communication disorders. Based on exploration of theoretical constructs, this course demonstrates application of therapeutic methodologies to reduction of communication handicaps.
SPA 4613C Intermediate American Sign Language (4) AS CSD
PR: SPA 3612D, DPR. A continuation of the basic course which expands the student's signing skills and introduces American Sign Language (ASL) idioms, body language, and facial expression as an integral part of ASL. An hour of laboratory work is included.

SPA 4614C Advanced American Sign Language (4) AS CSD
PR: SPA 4613C, DPR. A continuation of the study of American Sign Language (ASL). Includes advanced idioms, body language, and facial expression as an integral part of ASL. An hour of laboratory work is included.

SPA 4617 Structure of Sign Language (3) AS CSD
PR: SPA 4383 and SPA 4615L. A comprehensive introduction to the linguistic structure of American Sign Language (ASL). Topics include phonetics and phonemes; phonological processes; the identification, structure, and distribution of morphemes; principles of syntactic augmentation; detailed examination of the major syntactic structures of ASL; and the place of morphology, morphology, and syntax in terms of the larger context of grammar.

SPA 4662 Interpreting in Public Schools I (3) AS CSD
PR: Admission to ISI Program. CR: SPA 4368L. This course is restricted to majors only. This course provides techniques for interpreting instruction (non-instructional) in public school classes. The course covers the development of communication modes and languages used by deaf children. Includes interpreting practices and understanding teaching methods.

SPA 4663L Interpreting in Public Schools II Lab (1) AS CSD
CR: SPA 4662. This course is restricted to majors only. This course provides practical application of interpreting the subjects taught in the public school classes. Discussion includes class goals, instructional style, interpreter roles and responsibilities, and analysis of the classroom for accessibility and appropriateness for interpreting.

SPA 4666 Interpreting in Public Schools II (3) AS CSD
PR: SPA 4368, SPA 4368L, CR: SPA 4662L. This course is restricted to majors only. This course provides advanced techniques for interpreting instruction (non-instructional) activities and the development of communication modes and languages used by deaf children. Includes interpreting practices and understanding teaching methods.

SPA 4685 Practicum: Interpreting in Schools (1-3) AS CSD
This course is restricted to majors only. This course provides practice sessions in school settings under the supervision of an interpreter and course instructor. Each prelicensure student will shadow an interpreter, and participate in discussion about the overall performance.

SPA 4930 Selected Topics (1-6) AS CSD
PR: DPR. Intensive study of topics in Speech-Language Pathology, Audiology, and/or Aural Rehabilitation conducted under the supervision of a faculty member.

SPA 5150 Advanced Speech Science (3) AS CSD
PR: SPA 3011 or equivalent, SPA 5150L, and DPR. Advanced study of the acoustic, production, and perception of normal and disordered speech.

SPA 5152 Speech Science Instrumentation (2) AS CSD
PR: DPR or SPA 3011 or equivalent. This course offers experience in the use of speech recording, monitoring and analyzing equipment for the evaluation of normal and disordered voice and speech characteristics.

SPA 5303 Advanced Hearing Science (3) AS CSD
PR: DPR. The study of the physiological acoustics of the auditory periphery; the neuroanatomy and electrophysiology of the central auditory system; and psychoacoustic principles as they relate to clinical audiologic measurement paradigms.

SPA 5312 Perceptual and Central Auditory Tests (4) AS CSD
PR: DPR. The study of behavioral and electrophysiologic clinical tests designed to assess the functions of the peripheral and the central auditory system. Tests that incorporate non-speech stimuli and those that utilize speech stimuli will be included.

SPA 5328 Aural Rehabilitation: Adults (3) AS CSD
PR: DPR. This course is designed to provide information about and strategies for audiologic intervention with hearing-impaired adults. Topics covered include: speech reading, auditory training, hearing and assistive listening devices.

SPA 5403 Communication Disorders: Language (3) AS CSD
PR: DPR. Examination of research and clinical literature presenting major theoretical orientations pertaining to the etiology, evaluations, and treatment of those factors that hinder or interrupt normal language acquisition or function.

SPA 5408 Language-Learning in the School-Age Years (3) AS CSD
PR: SPA 4201 and DPR. Metalinguistic and metacognitive developments are linked to the instructional demands of classroom and clinical discourse; observational tools are applied to evaluation and intervention planning.

SPA 5506 Speech-Language Pathology and Audiology Practicum (1-3) AS CSD
PR: DPR. Participation in speech-language pathology and audiology practicum in the University Communication Disorders Center and community field settings.

SPA 5552 Diagnostic Principles and Practices (2) AS CSD
PR: Admission to the graduate program or DPR. The administration, evaluation, and reporting of diagnostic tests and procedures used in assessment of speech and language disorders.

SPE 2541 Persuasion (3) AS SPE
Examines the role of persuasion in public and social life. Students will be introduced to key concepts and theories of persuasion from a variety of historical and contemporary perspectives. Students will use these concepts to create, analyze, and respond to persuasive messages.

SPC 2800 Public Speaking SS (3) AS SPE
The nature and basic principles of human communication; emphasis on improving speaking and listening skills common to all forms of oral communication through a variety of experiences in public discourse.

SPC 3212 Communication Theory (3) AS SPE
PR: Junior standing or CI. The study of source, message, and receiver variables in human communication; communication settings; descriptive and predictive models of communication; communication as a process.

SPC 3230 Rhetorical Theory HP (3) AS SPE
This course surveys the foundations and historical evolution of major concepts, issues, theorists, and approaches to the study of rhetoric from Plato to recent contemporary theorists.

SPE 3301 Interpersonal Communication SS (3) AS SPE
A study of interpersonal communication in informally structured settings, with emphasis on the understanding, description, and analysis of human communication.

SPE 3425 Group Communication (3) AS SPE
PR: Junior standing or CI. A survey of theory and research in group communication. Group discussions and communication exercises to discuss processes of an understanding of the dynamics of human communication in small group settings.

SPE 3513 Argumentation and Debate (3) AS SPE
PR: Junior standing or CI. Study of principles of argumentation as applied in oral discourse, analysis of evidence and modes of reasoning. Practice in debate preparation and delivery.

SPE 3602 Advanced Public Speaking (3) AS SPE
PR: SPE 2600 or CI. Study and application of communication strategies in speaking extemporaneously and from manuscript. The course includes study of selected public addresses as aids to increased understanding of speaking skills.

SPE 3631 Rhetoric of the Sixties HP (3) AS SPE
Survey of the rhetorics associated with the civil rights movement, the Great Society, the anti-Vietnam War movement, the counterculture, the black power movement, and the women's movement.

SPE 3653 Popular Forms of Public Communication (3) AS SPE
PR: Junior standing or CI. Analysis of public communication with emphasis on various presentational forms.

SPE 3680 Rhetorical Analysis (3) AS SPE
This course introduces students to fundamentals of message analysis. Student examines persuasive strategies and language in oral and written discourse.

SPE 3710 Communication and Cultural Diversity SS (3) AS SPE
Examination of communication and cultural diversity within the United States. Cultural groups include racial and ethnic (e.g., African American, Latino American, Asian American), social class, age and generation, religious (e.g., Jewish) and gender.
SPC 4021 Oral Tradition MW (3) AS SPE
Study of orality, its forms, functions, and transformations, in traditional and literate societies from folkloric and psychological traditions and from contemporary communication and cultural studies perspectives.

SPC 4305 Communicating Emotions 6A (3) AS SPE
PR: Junior/Senior standing or C. Study of emotional experience, what emotions mean to us, how we talk about them, and the ways group and cultural membership influence them. Focus on attachment, intergroup, family and group relationships.

SPC 4310 Relationships on Film (3) AS SPE
Examination of the ways in which cinema inscribes conceptions and meanings of romance, love, intimacy and sexuality. Focus on systems and intersections fostered by cinema representations of intimacy, sexuality, emotional, subjectivity, and betrayal.

SPC 4431 Family Communication (3) AS SPE
Examines the processes and functions of communication in the development of families. Examination of scholarly and popular literature on family structure, family systems, family development, and family stories. Analysis of families in fiction and cinema.

SPC 4632 Rhetoric and Social Change 6A MW (3) AS SPE
PR: SPC 3230 or SPC 3681. This course examines how social change is symbolized and motivated by the rhetorics of institutions, campaigns, social movements and individuals.

SPC 4683 Rhetorical Analysis of Mass Media (3) AS SPE
PR: SPC 3230 or SPC 3681; Open to non-majors with C. An introduction to the rhetorical elements and perspectives of the aesthetic and persuasive dimensions of mass media are examined. Students will engage in critical study of media artifacts.

SPC 4714 Communication, Culture and Community MW (3) AS SPE
Examines the relationships among culture, communication, institutions, and public and private life. Students explore the possibilities and problems of contemporary forms of community through service in a volunteer organization.

SPC 4900 Directed Study (1-3) AS SPE
PR: Senior standing, minimum GPA 2.5, 15 hours of core requirements, and 9 elective hours completed, and CI. Maximum 6 hours.

SPC 4905 Undergraduate Research (1-3) AS SPE
PR: Senior standing, minimum GPA 2.5, 15 hours of core requirements, and 9 elective hours completed, and CI. Maximum 6 hours. Individual investigations with faculty supervision.

SPC 4930 Selected Topics (1-3) AS SPE
PR: Senior standing, minimum GPA 2.5, 15 hours of core requirements, and 9 elective hours completed, and CI. Variable topics.

SPC 4940 Senior Seminar in Communication (3) AS SPE
PR: Senior standing, minimum GPA 2.5, 15 hours of core requirements, and 9 elective hours completed, and CI. Communication major. Exploration of selected topics of current significance to the several areas of communication through group discussion and research.

SPC 4970 Honors Thesis (3) AS SPE
PR: Admission to Communication Honors Program. Involves individual research and preparation of an undergraduate honors thesis.

SPC 5930 Topics in Discourse (3) AS SPE
Variable topics course.

SPN 1120 Beginning Spanish I (4) AS MLL
CR: SPN 1120L. Not open to native or near-native speakers of Spanish. Development of basic skills in listening and reading comprehension, speaking and writing of Spanish.

SPN 1120L Beginning Spanish I Laboratory (1) AS MLL
CR: SPN 1120. Concurrent enrollment with a lecture session is required, and, if dropped, then dropped simultaneously. Not open to native or near-native speakers of Spanish. S/U only. A laboratory designed to offer additional practice using various instructional technologies and media.

SPN 1121 Beginning Spanish II Laboratory (1) AS MLL
CR: SPN 1121. Concurrent enrollment with a lecture session is required, and, if dropped, then dropped simultaneously. Not open to native or near-native speakers of Spanish. S/U only. A laboratory designed to offer additional practice using various instructional technologies and media.

SPN 1130 Accelerated Spanish For Near-Native Speakers and Others (1-4) AS MLL
PR: CI. Accelerated course for near-native speakers and others with some knowledge of Spanish capable of making rapid progress.

SPN 2200 Spanish I (3) AS MLL
PR: SPN 1121 or equivalent. May NOT be taken concurrently with SPN 2201. Not open to native or near-native speakers of Spanish.

SPN 2201 Spanish IV (3) AS MLL
PR: SPN 2200 or equivalent. May NOT be taken concurrently with SPN 2200. Not open to native or near-native speakers of Spanish.

SPN 2240 Conversation I (3) AS MLL
PR: SPN 1121. Not open to native or near-native speakers of Spanish.

SPN 2270 Advanced Overseas Study (1-6) AS MLL
PR: SPN 1121. Prior departmental approval and early registration are required. An intensive study-travel program in a Spanish-speaking country.

SPN 3300 Composition (3) AS MLL
PR: SPN 2200-SPN 2201. Not open to native or near-native speakers of Spanish. A study of syntax, grammar and writing.

SPN 3340 Advanced Spanish for Native Speakers I (3) AS MLL
PR: Native and near-native oral/aural proficiency. May not count as Spanish major elective. Continuation of SPN 3340. Course for native and near-native speakers of Spanish due to home environment and/or residence in a Spanish-speaking country, but without formal training in the language. Emphasis on grammatical and rhetorical challenges affecting such speakers. Texts and discussions in Spanish. This is primarily a discussion type of course, open to all majors and minors.

SPN 3341 Advanced Spanish for Native Speakers II (3) AS MLL
PR: SPN 3340. May not count as Spanish major elective. Continuation of SPN 3340. Course for native and near-native speakers of Spanish due to home environment and/or residence in a Spanish-speaking country, but without formal training in the language. Emphasis on those aspects of written expression such as style and syntax which are problematic for such speakers. Texts and discussions in Spanish. This is primarily a discussion course, open to all majors and minors.

SPN 3440 Spanish For Business (3) AS MLL
PR: SPN 2201 or equivalent. An introduction to the Spanish language as used in undertaking ordinary business transactions.

SPN 3441 Advanced Spanish for Business Writing (3) AS MLL
PR: SPN 3440 or equivalent. Open to Spanish and Business majors and minors. Continuation of SPN 3440. Advanced business communication in Spanish through discussion, reading, and writing of representative texts from Spain, Mexico, and the Spanish speaking Caribbean. Emphasis on business forms and composition of proposals, reports, records, and the language of advertising. Texts and discussions in Spanish. This is a discussion course, open to Spanish and Business majors and minors.

SPN 3500 Spanish Civilization (3) AS MLL
PR: SPN 1121. The culture and civilization of Spain.

SPN 3520 Spanish American Civilization (3) AS MLL
Readings and discussions on the culture and civilization of Spanish America. For majors and non-majors.

SPN 4301 Expository Writing (3) AS MLL
PR: SPN 3300. Not open to native or near-native speakers of Spanish. Practical training in contemporary Spanish structure, usage and stylistic devices.

SPN 4410 Advanced Composition (3) AS MLL
PR: SPN 2241 or equivalent. Not open to native or near-native speakers of Spanish. Intensive practice in the formulation and expression of ideas in standard Spanish.

SPN 4420 Advanced Overseas Study (1-6) AS MLL

SPN 4700 Spanish Linguistics (3) AS MLL
PR: SPN 3410 or equivalent (may be taken concurrently with CI) and, SPN 2201 or equivalent. An introduction to Hispanic linguistics: Phonology, morphology, syntax and lexicography.

SPN 5525 Modern Spanish American Civilization (3) AS MLL
PR: SPN 3520 or equivalent or graduate standing. Advanced readings and discussions dealing with Spanish American civilization and culture, including a study of social, artistic and political
The teaching profession, school settings, legal, and classroom management issues are also studied. Fieldwork in a high school is required.

SSE 4380 Global And Multicultural Perspectives in Education and MW (3) ED EDW PR: EDG 3604 and EDG 4620, or DPR. Examination of the major issues surrounding global and multicultural perspectives in education. Available to non-Education majors.

SSE 4640 Communication Skills in the Social Sciences (2) ED EDW PR: CC. S/U only. This course emphasizes preparation for instruction and demonstration of instructional techniques in social sciences covered in SSE 4333 and SSE 4334 with an emphasis on students developing their communication, presentation, and organizational skills.

SSE 4670 Economics USA: Principles of Economics for Teachers (3) ED EDW S/U only. A television course focusing on content and teaching methodology related to micro/macro economic principles.

SSE 4936 Senior Seminar in Social Science Education (2) ED EDW PR: Senior standing; CR: SSE 4940. Synthesis of teacher candidate's courses and preparation for the professional interview and application process.

SSE 4940 Internship: Social Science Education (1-12) ED EDW CR: SSE 4936. S/U only. One full semester of internship in a public or private school. In special programs where the intern experience is distributed over two or more semesters, students will be registered for credit which accumulates from 9 to 12 Semester hours.

SSE 5644 Economic Decision-Making for Teachers (3) ED EDW PR: Admission to Education or DPR. Provides teachers (K-12) with content related to the operation of businesses in a market economy. Teachers analyze economic/business concepts from the perspective of individuals currently operating businesses in the Tampa Bay area. Focus of the instruction is on the application of content to K-12 instructional programs.

STA 2022 Basic Statistics 6A QM (3) AS MTH PR: Two years of high school algebra. Students who successfully complete this course may not also receive credit for QMB 2100 or STA 222. No credit for Mathematics Majors. Descriptive statistics, basic probability principles, discrete and continuous probability distributions: binomial, Poisson, uniform, normal, t, chi-square and F; point estimation, confidence limits, hypothesis testing, correlation analysis, and linear regression. Emphasis on application to social sciences, life sciences, physical sciences, engineering and business.

STA 2122 Social Science Statistics 6A QM (3) AS IS S Descriptive and inferential statistics - through ANOVA, correlation-regression, chi-square and non-parametrics. The course presents statistics with the view that numbers are a critical tool of understanding the world. Draws concepts and hypothesis from a wide range of disciplines.

STA 2024 Introductory Statistics I 6A QM (4) AS MTH PR: STA 2023 or CC. Factorials, ANCOV: multiple curvilinear regression; response surfaces; Latin squares, Split Plots, incomplete designs; distribution free methods.


STA 4442 Introduction to Probability 6A (3) AS MTH PR: MTH 2122 or MTH 2313. Basic ideas of probability and random variables, discrete probability functions, continuous probability densities, joint distributions, transformations of random variables, moments and generating functions of random variables. Introduction to probability theory using calculus.

STA 5166 Computational Statistics I (3) AS MTH PR: STA 4321 and CUG 3422, or CI. Statistical analysis of data by means of statistical package programs. Regression, ANOVA, discriminant analysis, and analysis of categorical data. Emphasis is on a broad range of statistical theory, numerical methods, and analysis of real life data.

STA 5228 Sampling Techniques (3) AS MTH PR: STA 4321 or CI. Sampling versus total enumeration. Planning of a survey. Statistical sampling methods and their analysis; simple,
SYD 4800 Gender and Society (3) AS SOC
Historical and current issues surrounding gender in America. Emphasis on exploring the causes, meaning, and consequences of gender differences, interpersonal relationships, and institutional participation.

SYG 2000 Introduction to Sociology SS (3) AS SOC
An introduction to sociological perspectives and methods and the basic areas of sociological interests such as socialization, gender, race and ethnic relations, deviance, social control, and social stratification. Required for Sociology majors.

SYG 2010 Contemporary Social Problems SS (3) AS SOC
The analysis of social causes and dimensions of major public issues such as crime, the environment, inequality, gender, employment, and substance abuse.

SYG 2412 Marriage (3) AS SOC
Does not count for sociology major credit. Study of pre-marital relationships. Social, cultural, and personal factors related to success and failure in mate selection and marriage. Does not count for major credit.

SYG 3235 Latina Lives (3) AS SOC
An exploration of the experiences of Latinas in the United States. Uncover and examine such sociological themes as oppression, migration, work, family, activism, spirituality, and sexuality through short stories, poetry, and scholarly research.

SYO 3120 Sociology of Families (3) AS SOC
With a goal to understand American families in the present, this course will examine various family types within class, race, ethnicity, and historical era. Exploration of current controversies about how families should be organized and about what they should do for their members as well as social policies related to families.

SYO 3300 Research Methods (3) AS SOC
PR: SYG 2000 or CI. An examination of recent trends in sociological theory. Emphasis is on theories examining symbolic interactions, lived experience, popular culture, and social structures.

SYO 3500 Sociological Analysis (3) AS SOC
PR: SYG 2000 or CI. An examination of research methods and its application to social science research. Required for Sociology majors.

SYO 3310 Qualitative Inquiry 6A LW (3) AS SOC
PR: SYG 2000 or CI. Majors only. Exploration of human relationships and behaviors, organizations, and the larger culture through research techniques such as interviews, participant observation, life histories, and narratives.

SYO 3700 Sociology of Sexualities (3) AS SOC
This course explores how sexualities are socially constructed. How do we give meanings to sexualities? Who is involved in this process, and how? What institutions participate, and how? Finally, what role do we play, as individuals?

SYO 4081 Individual Research (1-3) AS SOC
PR: Four courses in sociology, including SYO 3300, upper level standing, at least 3.0 overall GPA, or CI. Content depends on the interest of the student. A contract between the student and the sponsoring faculty member must be signed before class registration.

SYO 4300 Research in Sociology (3) AS SOC
PR: SYG 2000 or CI. Selected specialized topics in Sociology. Topics include AIDS, drugs in society, problems in education, sociology of childhood, and sociology of the family. Sociology of the family.

SYO 4481 Urban Sociology (3) AS SOC
PR: SYG 2000 or CI. Upper-level standing. The social structure of the community in modern industrial societies. Analysis of community change.
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SYP 4530 Sociology of Juvenile Delinquency (3) AS SOC
PR: SYG 2000 or CI. Sociological issues in defining delinquency; the nature of adolescence and delinquency; sociological theories of the causes of delinquency; types and consequences of social control applied to delinquents.

SYP 4600 Sociology of Family (3) AS SOC
PR: SYG 2000 or CI. Sociological examination of marriage in the United States and other countries. Topics include changing leisure time patterns, relationships between leisure and work, personality, family, community, subcultures, religion, and social class.

SYG 4650 Sport and Society (3) AS SOC
PR: SYG 2000 or CI. An examination of the broad issues concerning sport in both a historical and contemporary perspective. Sport will be viewed in relation to social institutions, economic considerations, media, and sport governance and sport governance as a micro-social system.

TAX 4001 Concepts of Federal Income Taxation (3) BA ACC
PR: ACG 2021. Major concepts used in taxation of income by federal government including enactment of tax laws, basic tax research, preparation of basic tax returns and exploration of tax policy issues.

TAX 5015 Federal Taxation of Business Entities (3) BA ACC
PR: TAX 4001. Tax issues encountered by small businesses. Includes tax planning, capital formation and preservation, tax compliance and tax alternatives.

THE 2020 Introduction to Theatre (3) FA TAR
An introduction to the art of theatre as part of the larger context of the nature of art itself. The approach will be both chronological and multi-cultural. Required of all theatre majors.

THE 2305 Introduction to TV and Stage (3) FA TAR
PR: TPP 3920. This course teaches theatre students the techniques of close reading of dramatic texts.

THE 3090C Modern Theatre Practice 6A (4) FA TAR
Initial readings and exercises in theatre play analysis, performance, and technical theatre for non-theatre majors.

THE 3110 Theatre History I MW (3) FA TAR
PR: THE 2020. The study of theatrical production in its cultural context, including architecture, sceneography, acting, and directing. Normally fifteen plays will be read. Required of all theatre majors. Open to upper division non-majors.

THE 3120 Theatre History II MW (3) FA TAR
PR: THE 2305. A study of Theatre History in more detail as a companion to Theatre History I. This course and the companion Theatre History I will offer the opportunity for more careful study and emphasis on particular aspects of cross-cultural theatre in context.

THE 4180 Theatre of the Origins UA MW LW (3) FA TAR

THE 4268 Theatre Of Costume (3) FA TAR
Open to upper level non-majors with CI. A survey of clothing and dress from Ancient Egypt to the 20th Century with an emphasis on cultural and social influences. (A requirement in the design track/costume.)

THE 4286 Architecture And Decor (3) FA TAR
Open to upper level non-majors with CI. A survey of architecture and furniture from ancient Egypt to the 20th Century. (A requirement in the design track/scenic.)

THE 4320 The Theatre Of Myth And Ritual/Northern European (950-1600) And Oriental (400-1200) 6A MW LW (3) FA TAR
PR: THE 3110. Open to upper level non-majors with CI. An investigation into the interrelationship of myth, ritual, and theatre. Considers northern European liturgical and secular plays as compared with Hindu, Chinese, and Japanese dramatic works.

THE 4330 Shakespeare For The Theatre 6A MW LW (3) FA TAR
PR: THE 3110. Open to upper level non-majors with CI. A close study of selected plays with special emphasis on their performance values.

THE 4380 The 19th Century Theatre Revolution 6A MW LW (3) FA TAR
PR: THE 3110. Open to upper level non-majors with CI. Survey of the European art theatre revolution against the romantic realism of the commercial stage and its effect on subsequent theatre activity.

THE 4401 O'Neil And After 6A MW LW (3) FA TAR
PR: THE 3110. Open to upper level non-majors with CI. A course in the function of the script for the theatre artist treating materials in the American Theatre from 1915 to 1964.

THE 4434 Caribbean Theatre 6A MW LW (3) FA TAR
This course is a study of plays and popular theatrical forms of the Caribbean. The student will investigate the social and political forces that shape the culture of the Caribbean, the residual effects of the colonialism and the turbulence of independence as expressed in the dramatic art and theatre of the English-speaking West Indies.

THE 4435 Theatre Of Plurism 6A MW LW (3) FA TAR
PR: Jr. or Senior standing or THE 3110, CI. Open to upper level non-majors with CI. The practical theatre as it reflects cultural heritage, gender, race and sexual orientation. Study of contemporary scripts, critical and artistic statements.

THE 4442 The Comedy Of The Classic And Neo-Classic Stage 6A LW (3) FA TAR
PR: THE 3110. Open to upper level non-majors with CI. A study of comedic function in scripts from Greek and Roman, Restoration and French Neoclassic of the late 17th century and other plays from the late 18th and 19th centuries which reflect similar characteristics.

THE 4480 Drama-Special Topics (3) FA TAR
PR: THE 3110. Open to upper level non-majors with CI. A study of a significant playwright or group of playwrights, e.g. Molieres, Brecht, recent American Realists.

THE 4562 Contemporary Performance Theory 6A MW LW (3) FA TAR

THE 4593 Honors Seminar (2) FA TAR
Enrollment limited to upper level non-majors who have been formally admitted to the department honors program. Not available S/U. Readings in the literature, history and theory of the stage in preparation for Theatre Honors Practicum. Past topics have included New German Theatre, Popular Theatre, New American Theatre, Jacobson Theatre.

THE 4594 Honors Practicum (3) FA TAR
PR: THE 4593. Honors Practicum grows out of the Honors Seminar and engages students in workshops or production with guest directors. Courses include The Free Theatre of Munich, the San Francisco Mime Troupe, playwrights Eric Overmeyer, Jeff Jones and Gary Hill.

THE 4595 Honors Thesis (1-3) FA TAR
PR: THE 4594. A practical or written thesis related to the seminar and practicum and approved by the departmental honors committee.

THE 4722 Theatre For Pre-School Students: The Production Process (3) FA EDD
PR: THE 2490. A practical or written thesis related to the seminar and practicum and approved by the departmental honors committee.

THE 4723 Theatre For Pre-School Students: The Performance Process (3) FA EDD
PR: THE 2490. A practical or written thesis related to the seminar and practicum and approved by the departmental honors committee.

THE 4761 Methods of Teaching Theatre for Adolescents (3) FA EDD
Methods of effective drama and theatre instruction in middle school, junior and senior high schools, recreation centers, community and professional theatres.

THE 4905 Directed Studies (1-4) FA TAR
PR: CI. Independent studies in the various areas of Theatre. Course of study and credits must be assigned prior to registration.

THE 4930 Selected Topics In Theatre (1-8) FA TAR
PR: CI. The content of the course will be governed by student demand and instructor interest. May be lecture or class discussion or studio format.

THE 5140 Directed Studies (1-6) FA TAR
PR: CI and CC. Independent studies in the various areas of Theatre. Course of study and credits must be assigned prior to registration.

THE 5931 Selected Topics In Theatre (1-8) FA TAR
PR: CI. The content of the course will be governed by the student demand and instructor interest. May be lecture or class discussion or studio format.

TPA 2200 Introduction to Technical Theatre I (3) FA TAR
CR: TPA 2290L or CI. An introductory course in technical production including coursework in two areas from scenic construction, stage lighting, costume construction, sound, and theatre production/organization. Required for Theatre majors. Requires sequential semester enrollment with TPA 2210 and TPA 2291L. Open to non-majors.

TPA 2210 Introduction to Technical Theatre II (3) FA TAR
CR: TPA 2291L or CI. An introductory course in technical production including scenic construction, stage lighting, costume construction, sound, and theatre organization. Required for Theatre majors.
TPA 2248 Workshop In Stage Makeup (1) FA TAR
Beginning theory and practice in make-up for the stage. Open to non-majors. Theatre majors given preference. (This course is a studio course.)

TPA 2291L Technical Theatre Lab I (1) FA TAR
CR: TPA 2290 or CI. A practical laboratory involving the pre-performance preparation of all technical aspects of a major production such as: painting, sewing, lighting, and sound. Students are assigned two areas of study per semester. Required of all Theatre majors. Open to non-majors.

TPA 2291L Technical Theatre Lab II (1) FA TAR
CR: TPA 2210 or CI. A practical laboratory involving the pre-performance preparation of all technical aspects of a major production such as: painting, sewing, lighting, and sound. Students are assigned two areas of study per semester. Required of all Theatre majors. Open to non-majors.

TPA 2292 Theatre Production and Administration (1) FA TAR
PR: TPA 2290L and TPA 2291L or CI. The rehearsal, construction, and performance of major theatrical works. Assignments are made by a faculty committee following the students completion of a PI request form, available in the Theatre Office, and enrollment in this course.

TPA 3208 Drafting and CAD I (3) FA TAR
PR: TPA 2210, TPA 2290L, and TPA 2291L. The course will include lectures, demonstrations, design and design applications, and software activities. The course will provide an introduction to the various aspects of design including: two and three dimensional design, basic presentation and visual communication skills, research, and project analysis/organization. Open to non-majors.

TPA 3211 Lighting: Theory And Practice (3) FA TAR
PR: TPA 3208 or CI. Intermediate lighting design course concerned with graphic presentations, color theory, design concepts, and production values in computer lighting systems. A requirement in the design track/lighting.

TPA 3231 Costume Construction (3) FA TAR
CR: TPA 2200 or CI. A practical laboratory involving the pre-performance preparation of all technical aspects of a major production such as: painting, sewing, lighting, and sound. Students are assigned two areas of study per semester. Required of all Theatre majors. Open to non-majors.

TPA 3251 Drafting and CAD II (3) FA TAR
PR: TPA 3208. Continuation of TPA 3208. The course will include lectures, demonstrations, field trip(s), individual student presentations, and story activities. The course work will provide an opportunity to develop skills and techniques in the visual presentation of various design and technical drafting. Required of all Design Track Theatre majors. Open to non-majors.

TPA 3265 Sound For The Stage (3) FA TAR
PR: TPA 2223. Open to non-majors with CI. Basic study of studio control techniques, fundamental properties of sound, multiple channel recording, editing, reproduction and reinforcement. Methods and techniques used in theatre to create sound effects.

TPA 3296 Design Practicum (2) FA TAR
PR: TPA 3208. This is a studio/laboratory course in the practical aspects of production. The course is intended to provide real-world production experience to the advanced theatre design student in such areas as costume, lighting, and scenic design; stage properties design; technical direction; and theatrical production craft/skill area. The student will be individually mentored by a faculty member through the process of developing and realizing a production design/craft/skill.

TPA 3601 Stage Management (2) FA TAR
PR: TPA 2190 or TPA 2232. Open to non-majors with CI. A practical course in the working organizational function of the stage manager in theatre, dance, opera, and other live performance situations.

TPA 3840 Puppetry Performance And Production (4) FA TAR
PR: TPA 3610. Open to non-majors with CI. The creation, building, rehearsal, and performance of plays for puppet theatre.

TPA 4011 Design Studio I (3) FA TAR
PR: TPA 3208, TPA 3231, TPA 3221, TPA 3251. TPA 4024 will include studio design project activities in the areas of costume, lighting, and scenic design. The course work will stress the nature of collaborative work and the various stages and processes involved with the development of a design from the first meeting to the final paper/model design. Evaluation of the project will emphasize the process followed in the development of the design including; brainstorming, ideation, research, and production concept. The course will include seminar (production) discussions, lectures, demonstrations, individual and group work, and individual student presentations.

TPA 4012 Design Studio II (3) FA TAR
PR: TPA 4011. This course will include studio design project activities in the areas of costume, lighting, and scenic design. The course work will stress the nature of collaborative work and the various stages and processes involved with the development of a design from the first meeting to the final paper/model design. Evaluation of the project will emphasize the process followed in the development of the design including; brainstorming, ideation, research, and production concept. The course will include seminar (production) discussions, lectures, demonstrations, individual and group work, and individual student presentations.

TPA 4013 Design Studio III (3) FA TAR
PR: TPA 4012. This course will include studio design project activities in an individual’s selected primary and secondary areas of costume, lighting, and/or scenic design. The course work will stress the nature of collaborative work and the various stages and processes involved with the development of a design from the first meeting to the final paper/model design.

TPA 4077 Scene Painting (2) FA TAR
PR: TPA 3004. Open to upper level non-majors with CI. A practical studio course in the painting of stage scenery, media and application.

TPA 4273 Stage Properties: Techniques And Materials Studio (2) FA TAR
PR: TPA 3004. Open to upper level non-majors with CI. Demonstration of and experience with materials used in construction of stage properties. Designing and/or working in a production workshop.

TPA 4293 Production Involvement II (1) FA TAR
PR: TPA 2292 or CI. The rehearsal, construction, and performance of collaborative works are made by a faculty committee following the student’s completion of a PI request form, available in the Theatre Office, and enrollment in this course.

TPA 4298 Advanced Design Practicum (3) FA TAR
PR: TPA 4011. This is a studio/laboratory course in the practical aspects of production. The course is intended to provide real-world production experience to the advanced theatre design student in such areas as costume, lighting, and scenic design; stage properties design; technical direction; and theatrical production craft/skill areas. The student will be individually mentored by a faculty member through the process of developing and realizing a production design/craft/skill.

TPA 2190 Studio Theatre Performance I (1) FA TAR
TPP 2500 Body Disciplines (2) FA TAR
TPP 3155 Scene Study I (3) FA TAR
TPP 3230 Laboratory Workshop In Performance (3) FA TAR
TPP 3580 Special Skills In Movement (2) FA TAR
TPP 3790 Voice Preparation For The Actor (3) FA TAR
PR: TPP 3790 or TPP 3921. An elective sequence in direction. A workshop course in which the student first encounters the basic tasks of the director by preparing and directing one or two scenes, and then progresses to more complex scene work in a variety of styles and finally proceeds to the short play or theatre pieces.

TPP 3791 Directing I (3) FA TAR
PR: TPP 3790 or TPP 3921. A workshop course in which the student first encounters the basic tasks of the director by preparing and directing one or two scenes, and then progresses to more complex scene work in a variety of styles and finally proceeds to the short play or theatre pieces.

TPP 3801 Writing For The Theatre (3) FA TAR
PR: TPP 2110 and THE 2305. An elective sequence in directing, in which the student first encounters the problems unique to dramatic language and situation, then progresses to complexities of character, plot, and stage dynamics. Normally the aim would be to complete several performance-worthy self-contained scenes.

TPP 3920 Senior Workshop For Actors (3) FA TAR
PR: TPP 2500, TPP 2790, and TPP 3150, or TPP 3921. A workshop in advanced performance and movement techniques.

TPP 3923 Music Theatre Workshop (3) FA TAR
PR: TPP 2110 and audition. Open to non-majors by audition only. Exploration of Musical Theatre materials and performance techniques for advanced performers. Individual and ensemble work.

TSL 4374 Methodology of Teaching English Overseas (3) AS MLL
PR: Upper-level standing. Designed to introduce and prepare the enrolee in the various facets of teaching English as a foreign language to non-English speaking students. It will include aspects of teaching verbal skills and comprehension as well as writing. It involves a practicum at the English Language Institute on campus.

TSL 5321 ESOL Strategies for Content Area Teachers (3) AS MLL
Course designed for public school teachers working with limited English Proficient (foreign) students in the classroom. The new ESOL requirements specify that this course be offered to content area teachers and to ESOL teachers.

TSL 5371 Methods of Teaching English As A Second Language (3) AS MLL
Analysis of the methods of teaching English pronunciation and structure to speakers of other languages.

TSL 5372 ESOL Curriculum and Instruction (3) AS MLL
Analysis of the methods of teaching English pronunciation and structure to speakers of other languages.

TSL 5741 Language Testing (3) AS MLL
PR: TSL 5371 Lecture course on testing English as a second/foreign language.

TSL 5525 Cross-Cultural Issues in ESL (3) AS MLL
PR: LIN 5700 Lecture course on cultural issues in Teaching English as a Second/Foreign language.

TTE 4004 Transportation Engineering I (3) EN EGX
PR: TPP 2790, TPP 3321. Principles of transportation system development, design, and operations. Administration, modal characteristics, capacities, and functional classifications; vehicle kinematics, human factors and minimum design standards; traffic flow theory and queuing, capacity and signalization; transportation planning and economics.

TTE 4821 Transportation Systems Design (2) EN EGX
CR: TTE 4005. Comprehensive surface transportation design laboratory involving function design, traffic and facility sizing, complete alignments & layout plan and quantity preparation with computerized designed applications.

TTE 5205 Traffic Systems Engineering (3) EN EGX
Traffic models, intersection analysis, capacity analysis, data methods collection, parking studies, volume and speed studies, freeway management, and advanced technologies.

TTE 5501 Transportation Planning and Economics (3) EN EGX
PR: College Algebra & CI. Fundamentals of urban transportation planning: trip generation, trip distribution, modal split, traffic assignment; introduction to environmental impact analysis, evaluation of choice of transportation alternatives.

URP 4050 City Planning and Community Development (3) AS
An introduction to the development, role, and components of city planning, and the political and actual policies of government in attempting to regulate or control urbanization.

URP 4502 Urban and Regional Planning (4) AS GPY
PR: TPP 3790 or TPP 3921. The geographic foundations of the modern city, metropolitan development, and the trend toward megalopolis. Examined are the political problems of conflicting jurisdictions at the local, county, state, national, and international levels.

VIC 3001 Introduction to Visual Communications (3) AS COM
PR: MMC 2100 and MMC 3602. The survey of visual communication theory, techniques, and their contemporary application and social influences as applied to the visual media with emphasis on still photography, motion pictures, video tape, and graphics.

VIC 3943 Visual Communication Practicum (1) AS COM
PR: Senior standing and CI. For visual communications sequence majors. S/U only. Practical experience outside the classroom where the student works for academic credit under the supervision of a professional practitioner. Periodic written and oral reports to the faculty member coordinating the study.

WST 3010 Introduction to Women's Studies SS AF (3) AS WST
Survey of major issues relevant to the female experience. The women's movement: historical, psychological, sociological, anthropological perspectives.

WST 3011 Issues in Feminism SS (3) AS WST
Survey of major issues relevant to the female experience: marriage and the family, sexuality, work, creativity.

WST 3210 Women in Western Civilization I 6A HP (3) AS WST

WST 3220 Women in Western Civilization II HP (3) AS WST
Survey of European women from the late Middle Ages to the seventeenth century: differing consequences of historical change for women and men.

WST 3225 Women, Environment and Gender MW (3) AS WST
Course designed to: provide students with a basic understanding of relationships between women's physical, health and occupa-
This course is designed to familiarize students with modern understanding of spoken women from a theoretical perspectives from feminist intellectuals. Recognizing the critiques of science as a and wicca. A study of feminist critiques of American women's experiences and intersection of gender, status, and their role as patient and provider of care are shaped by public and cultural assumptions. A study of representations of women in Hollywood films and the responses of feminist film theorists and filmmakers working in documentary, experimental and narrative modes. An exploration of the historical, social and political perspectives of women's health and healing experiences, and how women's role as patient and provider of care is shaped by public and cultural assumptions. An interdisciplinary introduction to the research process as it has been carried out on women of color nationally and internationally. The course is designed to familiarize students with the role of women in the context of modern feminism. This course is restricted to seniors. An analysis of Animal and human behavior such as sex, territoriality, and aggression in the context of evolution. This course is restricted to seniors. An analysis of Animal and human behavior such as sex, territoriality, and aggression in the context of evolution. An interdisciplinary introduction to the research process as it has been carried out on women of color nationally and internationally. This course is restricted to seniors. An analysis of Animal and human behavior such as sex, territoriality, and aggression in the context of evolution.
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<tr>
<th>Name</th>
<th>Title and Institution</th>
</tr>
</thead>
<tbody>
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<td>APPLEGATE, JANE H.</td>
<td>Professor (Deans of C-Education)</td>
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<tr>
<td>B.S., M.S., Ph.D.</td>
<td>State University, 1997</td>
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<tr>
<td>ARBOR, SUSAN A.</td>
<td>Assistant (Public Health)</td>
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<tr>
<td>B.A., B.S., M.S.W., M.P.H.</td>
<td>Florida State University, 1995</td>
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<td>ARCHER, KEVIN</td>
<td>Associate Professor (Geography)</td>
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<tr>
<td>B.A., M.A., Ph.D.</td>
<td>Johns Hopkins University, 1990</td>
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<td>ARENDASH, GARY W.</td>
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<tr>
<td>B.S., Ph.D.</td>
<td>University of California, San Francisco, 1978</td>
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<td>ARGYRIOU, MAGDALENE</td>
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<td>B.A., M.A.</td>
<td>Kent State University, 1971</td>
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<td>ARMSTRONG, KATHLEEN</td>
<td>Assistant in (FMHI)</td>
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<td>ARNADE, CHARLES W.</td>
<td>Distinguished Professor (Government &amp; International Affairs), 1961</td>
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<td>B.A., M.A., Ph.D.</td>
<td>University of Florida, 1955</td>
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<td>ARNOLD, JANE F.</td>
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<td>B.S., M.D.</td>
<td>University of Miami School of Medicine, 1991</td>
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<tr>
<td>ARNOLD, KRISTIN</td>
<td>Instructor (Radiology)</td>
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<tr>
<td>B.A., M.F.A.</td>
<td>Brooklyn College, 1992</td>
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<tr>
<td>ARRINGTON, JOHN A.</td>
<td>Associate Professor (Radiology)</td>
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<td>University of South Florida, 1993</td>
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<tr>
<td>ARSENAULT, KATHLEEN H.</td>
<td>University (Libraries, St. Petersburg Campus, 1982</td>
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<td>ASHAWAY, ALAA K.</td>
<td>Assistant Professor (Civil Engineering and Mechanics), 1991</td>
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<td>B.S., M.S., Ph.D.</td>
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<td>AUBEL, JEL.</td>
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<td>B.S., Ph.D. Michigan State</td>
<td>University, 1964</td>
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<tr>
<td>AULT, MEREDITH</td>
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KLOSSNER, DAVID A., Assistant Professor (Physical Education), 1999
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KLUSSDHAL, SCOTT N., Associate Professor (Music), 1991
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KNIPPEN, JAY T., Professor (Management), 1970
B.B.; M.B., University of Florida, 1972

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KNOFF, TANICE Y., Coordinator (Education), Sarasota Campus, 1995
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KNOX, MICHAEL D., Director and Distinguished Professor (Community Mental Health), 1988
B.A.; M.S.W., M.A., Ph.D., University of Michigan, 1974

KOCHE, DIANE E., Assistant Professor (Pediatrics), 1989
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KOELER, JERRY W., Professor (Management), 1976

KOERS, NINON, Assistant Professor (Bus. Adm.- Finance), 1998
B.A.; M.B.A., Ph.D., Florida State University, 1998

KOLAKOWSKA, ALICE K., Assistant Professor (Natural Sciences), 1998
B.S., M.S., Ph.D., University of Western Ontario, 1995

KORTHALS, JAN K., Professor (Neurology), 1980
M.D., Medical School, Washington University, 1968

KOSTEWICZ, DOUGLAS E., Instructional Specialist (Mental Health Law & Policy), 1998
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KOTHPALLI, RAVI, Assistant Professor (Pathology), 1995
B.Sc.; M.Sc; Ph.D., University of Western Ontario, Canada, 1986

KOUSSEFF, BORIS, Professor (Pediatrics), 1981
M.D., High Institute of Medicine, Sofia, Bulgaria, 1959

KOVAL, MICHAEL G., Dean and Professor (Engineering), 1979
B.S.; M.S., University of South Florida, 1980

KRAEMER, THERESA J., Research Assistant Professor (Com-Physical Therapy & Occup), 1999
B.S., M.S., Ph.D., Virginia Commonwealth, 1991

KRAMER, JEFFREY H., Research Assistant In (Ctr for Urban Transp Rsch), 1999
B.A.; M.A., Georgia Tech, 1994

KRACIEVSKI, Professor, Mathematics) 1995
B.S.; M.A., Ph.D., Binghamton University, 1993

KRANG, STANLEY C., Professor (Civil Engineering and Mechanics), 1972
B.S.; Ph.D., Northwestern University, 1966, P.E.
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<td>University Librarian (Academic Support &amp; Achievement)</td>
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<td>(Psychology)</td>
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<td>OGLE, LARRY R.</td>
<td>Instructional Specialist (Law and Mental Health)</td>
<td>1999</td>
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<td>(Psychology)</td>
<td>M.A., C.W. Post Grad College</td>
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<td>OHEGBULAM, FESTUS UGBOA</td>
<td>Professor (Government and International Affairs)</td>
<td>1972</td>
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<td>OHANIAN, DAVID</td>
<td>Associate Professor (School of Music)</td>
<td>1998</td>
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<td>OKOSOYA, GEOFFREY O.</td>
<td>Research Instructor (Medical Microbiology)</td>
<td>1981</td>
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<td>O'REILLY, JAMES S.</td>
<td>Professor/Associate in</td>
<td>(Child &amp; Family Studies)</td>
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<td>University of Oregon</td>
<td>1991</td>
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<td>O'ROURKE, JEFFREY M.</td>
<td>Associate Professor (Surgery)</td>
<td>1997</td>
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<td>NICKELS, BRADLEY J.</td>
<td>Associate Professor (Visual Arts)</td>
<td>1970</td>
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<td>NICOLOSI, CAROLYN W.</td>
<td>Faculty Administrator (College of Medicine)</td>
<td>1975</td>
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<td>A.A., Florida College, 1972</td>
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<td>NICOLOSI, GREGORY A.</td>
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<td>Associate Professor (Surgery)</td>
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<td>NICHOLAS, J.</td>
<td>Librarian (University Libraries)</td>
<td>St. Petersburg Campus, 1995</td>
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<td>Vice President (Health Sciences)</td>
<td>1993</td>
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SUN, JIAZHI, Research Associate (Biochemistry), 1996
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SUTCLIFFE, MAXINE J., Research Assistant Professor (Pediatrics), 1995
B.S., Ph.D., University Of London, 1989
SUTTON, EDGAR T., Research Assistant Professor (Physiology), 1973
A.A., B.A., M.S., Ph.D., University of South Florida, 1997
SWAN, ALBERT V., Instructor (Psychiatry), 1997
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SWINTON, JOHN R., Assistant Professor (Economics), 1995
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SWITZER, LAURA L., Assistant Professor (Com.-Physical Therapy), 1998
B.S., Ph.D., State University, 1986
SZABUNIO, MARGARET M., Assistant Professor (Radiology), 1990
B.A.; B.S., M.D., Hahnemann University Medical School, 1984
SZENTIVANYI, ANDOR, Graduate Research Professor (Internal Medicine), 1970
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SZEP, HELENA K., Associate Professor (Pre-Colonial Arts), 1990
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TABER, LYNN S., Associate Professor (Leadership Development), 1998
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TALONE, JOHN W., Instructional Specialist (Florida Mental Health Institute), 1989
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TAN, JUN, Research Assistant Professor (Psychiatry), 1997
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TARA, PATRICK D., Research Associate (Civil & Environmental Engineering), 1994
G., C.E., M.S.C.E., University of South Florida, 1991
TARALLO, MARION, Instructional Specialist (Law & Mental Health), 1996
B.A., M.A., Villanova, 1972
TATE, CAROL F., Instructor (Social Work), 1998
B.S., M.S.W., Florida State University, 1994
TATUM, JAMES C., Associate Professor (Division of Languages), 1963
B.A.; M.A., Ph.D., Tulane University, 1968
THABER, JENNIFER, Visiting Assistant In (Dean's Office), 1999
M., A.B., Oberlin College, 1991
TAUBER, STEVEN C., Assistant Professor (Government and International Affairs), 1995
B.A., M.A., Ph.D., University of Virginia, 1995
TAYLOR, ELLA L., Research Associate (CSFD), 1996
B.A., M.A., Ph.D., 1985
TAYLOR, JUDY H., Assistant In (Pediatrics), 1984
B.S.N., University of Tampa, 1984
TAYLOR, RICHARD N., Associate Professor (Philosophy), 1969
B.A.; B.D.; M.Phil., Yale University, 1969
TE STRAKE, DIANE, Professor (College of Arts & Sciences), 1970
B.S., M.A., Ph.D., Duke University, 1963
TEAGUE, GREGORY B., Associate Professor (Community Mental Health Servces), 1996
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TEBBENS, SARAH E., Assistant Professor (Marine Science), 1994
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TEBRUGGE, LYN C., Counselor/Advisor and Instructor (Academic Support & Achievement), 1983
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TEICHMANN, RONALD J., Assistant Professor (Bus., Adm.-Accounting), 1998
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TEGESSER, KATHY, Assistant Professor (Social Sciences), 1998
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TEODORESCU, HORIA-NICOLAI, Professor (Computer Sci & Eng.), 1997
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TROTII, TRAVIS

TRAVERS, THEOPHILPOULOS, DEAN T.

TROWERS, ROBERT A.

TROTT II, ELVIN F.

TRUCCO, PAMELA S.

TRUDEAU, KENNETH A.

TRUITT, WILLIS H.

TSEKOS, CHRIS P.

TUCKER, PAMELA S.

TUCKER, ROBERT A.

TURK, ROBERT W.

TURAC, MARIAN

TURANT, LISA R.

TURLINGTON, JOE

TURNTER, PATRICIA A.

TURPIN, ROLAND

TURPIN, RONALD L.

TURPIN, TERRY L.

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