ACCOUNTING (ACCT) 0041 0 sem. hrs.

PROFESSIONAL DEVELOPMENT LEVEL ONE
This non-credit, web-based course provides developmental opportunities for Professional Program in Accounting (PPA) students who are working on Level One skill development. Level One skills include oral and written communication skills, knowledge of the profession of accounting and its procedures, CPA requirements, ethics and professional responsibilities, professional demeanor and business etiquette, resume building, interviewing skills, and acquisition of accounting work experience. Prerequisites: admission to the Professional Program in Accounting and Junior standing or above.

ACCT 2301 (ACCT 2301) 3 sem. hrs.
FINANCIAL ACCOUNTING

ACCT 2302 (ACCT 2302) 3 sem. hrs.
MANAGERIAL ACCOUNTING
The use of accounting information as an aid to management decision making, including performance measurement and budgets. Prerequisite: ACCT 2301.

ACCT 3311. 3 sem. hrs.
INTERMEDIATE ACCOUNTING I
An intensive study of the balance sheet accounts and the related income statement accounts. It exposes the student to the various Accounting Principles Board opinions and Financial Accounting Standards Board statements as these publications affect the various accounts and transactions. It covers the various working capital accounts and operational assets. Prerequisites: ACCT 2301, ACCT 2302, and Junior standing or above.

ACCT 3312. 3 sem. hrs.
INTERMEDIATE ACCOUNTING II
A continuation of Intermediate Accounting I involving non-current liabilities and owner equity accounts, the Statement of Cash Flows, pensions, deferred Income Tax, financial statement analysis and several special problem areas. Prerequisites: ACCT 3311 and Junior standing or above.

ACCT 3314. 3 sem. hrs.
COST ACCOUNTING
A study of procedures and concepts in allocating the costs of firm inputs to outputs, determination and use of standard costs in the control function, profit planning and control techniques used in management decision-making. Prerequisites: ACCT 2301, ACCT 2302, and Junior standing or above. (MISY 2305 recommended.)

ACCT 3315. 3 sem. hrs.
MULTINATIONAL ENTITIES: ACCOUNTING AND CONSOLIDATIONS
A study of the similarities and differences between U.S. and other countries’ accounting and reporting procedures. Basic consolidation of international segments will be covered. Use of spreadsheets and web technology required. Prerequisites: ACCT 2302 and Junior standing or above.

ACCT 3316. 3 sem. hrs.
GOVERNMENTAL AND MUNICIPAL ACCOUNTING
A study of fund accounting used in governmental entities and non-profit organizations. Emphasis on budgetary and fund accounts. Prerequisites: ACCT 2301, ACCT 2302, and Junior standing or above.

ACCT 3321. 3 sem. hrs.
FEDERAL INCOME TAX I
Emphasizes the role of taxation in the business decision-making process. The course introduces the tools to conduct basic tax research and planning. Prerequisites: ACCT 2301, ACCT 2302, and Junior standing or above.

ACCT 3322. 3 sem. hrs.
FEDERAL INCOME TAX II
Examines additional, more complex topics in business decision-making, tax research, and tax planning. Prerequisites: ACCT 3321 and Junior standing or above.

ACCT 3340 3 sem. hrs.
FRAUD EXAMINATION
This course covers the basic principles of fraud examination. Course topics include the behavioral aspects of fraud and common fraud schemes including skimming, larceny, check tampering, register disbursement schemes, billing schemes, payroll and expense reimbursement, non-cash misappropriations, corruption and bribery, and fraudulent financial statements. Prerequisites: ACCT 2301, ACCT 2302 or equivalent and Junior standing or above.

ACCT 3355. 3 sem. hrs.
ACCOUNTING INFORMATION SYSTEMS
A study of the role of accounting information systems and related subsystems in both for profit and not-for-profit entities. The relationship of accounting information systems to other systems, including management information systems, is addressed. Concepts are reinforced by the completion of computer-based projects. Prerequisites: ACCT 2301, ACCT 2302, MISY 2305, and Junior standing or above.

ACCT 4311. 3 sem. hrs.
AUDITING PRINCIPLES AND PROCEDURES
Auditing principles and techniques underlying the audit process; procedures used in conducting external audits, reviews and compilations. Prerequisites: ACCT 3312, and Junior standing or above.

ACCT 4314. 3 sem. hrs.
ADVANCED ACCOUNTING PROBLEMS
A study of the organization, operation and liquidation of partnerships; multinational companies; corporate reorganization; estates, trusts, and financial statements for consolidated entities. Prerequisites: ACCT 3312 and Junior standing or above.

ACCT 4390. 1-3 sem. hrs.
CURRENT TOPICS IN ACCOUNTING
Selected topics for special study related to accounting functions, processes or issues. May be repeated for credit when topics vary. Prerequisites: Junior standing or above, and others depending on topic. Contact the Dean’s office for information.

ACCT 4396. 1-3 sem. hrs.
DIRECTED INDIVIDUAL STUDY
Individual supervised study and completion of a final report. Prerequisites: permission of instructor, Junior standing or above, and others depending on selected topic. Inquire at the Dean’s office for information.
ACCT 4398. 3 sem. hrs.
ACCOUNTING INTERNSHIP
Supervised full-time or part-time, off-campus training in public accounting, industry, or government. Oral and written reports required. Prerequisites: accounting major, and Junior standing or above with a minimum 3.00 accumulated GPA in upper division accounting courses. Student must apply to program and be accepted prior to registration. May not be repeated for credit. May not count as accounting requirement for CPA. State Board of Accountancy may not approve course as an accounting equivalent for CPA.

ANTHROPOLGY (ANTH) ______________

ANTH 3301. 3 sem. hrs.
CULTURAL ANTHROPOLOGY
Study of the social life of human groups from their earliest appearance to the present. Analyses of cultures include language, kinship, art, religion, economics, and political behavior. Cross-cultural comparisons allow development of generalizations about social patterns, social structure, and cultural practices found in human societies. (Credit may not be given for both this course and SOCI 3301.)

ANTH 3370. 3 sem. hrs.
NATIVE AMERICANS IN NORTH AMERICA
An ethnographic and historical analysis of Native American cultures in what is now called North America from prehistoric times to the present. (Credit may not be given for both this course and SOCI 3370.)

ANTH 3390. 3 sem. hrs.
SPECIAL TOPICS IN ANTHROPOLOGY
Study of different topics in anthropology including biological, archaeological, cultural, or linguistic subjects. May be repeated when topics vary.

ART (ARTS) ________________________

ARTS 1301 (ARTS 1301) 3 sem. hrs.
ART AND SOCIETY
Designed for non-art majors. Establishes a working vocabulary for evaluating works of art in various media. Objects are interpreted in terms of their specific historical contexts and the changing relationships between art and society. This course does not fulfill the art history requirement for art majors. This course satisfies the university core curriculum requirement in fine arts.

ARTS 1303 (ARTS 1303) 3 sem. hrs.
ART HISTORY SURVEY I
An examination of painting, sculpture, architecture, and other arts from the ancient through medieval periods. This course satisfies the university core curriculum requirement in fine arts.

ARTS 1304 (ARTS 1304) 3 sem. hrs.
ART HISTORY SURVEY II
A further examination of painting, sculpture, architecture, and other arts from the Renaissance through Modern periods. Prerequisite for art majors only: ARTS 1303.

ARTS 1311 (ARTS 1311) 3 sem. hrs.
DESIGN I
A studio course concerning the fundamentals of art with emphasis on two-dimensional concepts.

ARTS 1312 (ARTS 1312) 3 sem. hrs.
DESIGN II
A studio course concerning the fundamentals of art with emphasis on three-dimensional concepts.

ARTS 1316 (ARTS 1316) 3 sem. hrs.
DRAWING I
A studio course investigating a variety of media techniques, including their descriptive and expressive possibilities.

ARTS 1317 (ARTS 1317) 3 sem. hrs.
DRAWING II
A further investigation of media techniques explored in Drawing I, including their descriptive and expressive possibilities. Prerequisite: ARTS 1316.

ARTS 2311 3 sem. hrs.
DESIGN III: COLOR
Investigation of the properties of color. Color is studied and applied to studio-oriented design assignments. Prerequisites: 1303, 1304, 1311, 1312, 1316, 1317.

ARTS 2316 (ARTS 2316) 3 sem. hrs.
PAINTING I
A studio course exploring the potentials of painting media.

ARTS 2323 (ARTS 2323) 3 sem. hrs.
DRAWING III
A studio course introducing the structure and action of the human figure. Prerequisites: ARTS 1303, 1304, 1311, 1312, 1316, 1317.

ARTS 2326 (ARTS 2326) 3 sem. hrs.
SCULPTURE I
A studio course exploring sculptural approaches in a variety of media.

ARTS 2333 (ARTS 2333) 3 sem hrs.
PRINTMAKING I
An introductory studio course in basic printmaking processes and techniques.

ARTS 2346 (ARTS 2346) 3 sem. hrs.
CERAMICS I
An introductory studio course in basic ceramic processes.

ARTS 2356 (ARTS 2356) 3 sem. hrs.
PHOTOGRAPHY I
An introductory studio course using digital cameras and image manipulation software. Satisfies university computer literacy requirement.

ARTS 2361 3 sem. Hrs.
TYPOGRAPHY
Through the use of lectures, demonstrations and studio work students are introduced to the art of typography. An emphasis is placed on the history of type, anatomy of letter forms and appropriate uses of prescribed type faces. Hand rendering and digital media are used.

ARTS 2367. 3 sem. hrs.
WATERCOLOR
A studio course exploring techniques in water-base media.

ARTS 3301. 3 sem. hrs.
LIFE DRAWING
Drawing from the model using a variety of techniques and media. Prerequisite: ARTS 2323.

ARTS 3302. 3 sem. hrs.
INTERMEDIATE PRINTMAKING
Opportunity to work with relief, intaglio, lithographic, or screen printing processes to provide limited edition prints. Prerequisite: ARTS 2333.
ARTS 3303. INTERMEDIATE PAINTING  
Explores the issues of content, imagery, application, and influences of master artists. Prerequisite: ARTS 2316.

ARTS 3304. INTERMEDIATE SCULPTURE  
A study in sculptural design and expression. Examines the structural pattern of form through the elements and principles of design. Working with classical and contemporary techniques and materials. Prerequisite: ARTS 2326.

ARTS 3316. ART ACTIVITIES I  
Practical experience with basic design, drawing, painting, and sculpture, along with a study of art history and criticism. Includes a consideration of how these experiences relate to art curricula in the elementary school. Prerequisites: Completion of lower-division art course work in design (6 sem. hrs.), drawing (6 sem. hrs.), and art history (6 sem. hrs.)

ARTS 3322. ART ACTIVITIES II  
Practical experiences with basic design, drawing, painting, printmaking, sculpture, and crafts, along with a study of art history and criticism. Includes a consideration of how these experiences relate to art curricula in the secondary school. Prerequisites: Completion of lower-division art course work in design (6 sem. hrs.), drawing (6 sem. hrs.), and art history (6 sem. hrs.)

ARTS 3324. INTERMEDIATE CERAMICS  
Covers wheel-thrown ceramics, basic glazemaking, and an introduction to kiln firing and loading. Prerequisite: ARTS 2346.

ARTS 3350. ART OF THE UNITED STATES  
A survey of the major developments in the art of North America from Pre-Columbian times to the modern era.

ARTS 3352. MODERN ART, 1880-1945  
A survey of the major movements of 20th century art and aesthetics, which developed primarily in Europe. Includes a review of late 19th century modernist antecedents with emphasis placed on the principal movements of the early 20th century: Fauvism, German Expressionism, Cubism, Futurism, Abstract Art, Dada, and Surrealism.

ARTS 3353. CONTEMPORARY ART, 1945 TO THE PRESENT  
An examination of the dispersal of European artists and Modernism, primarily to America, as a result of World War II. Examines the development of Abstract Expressionism in New York in the 1940s and 50s, followed by a survey of recent trends in contemporary art to the present day.

ARTS 3360. GRAPHIC DESIGN I  
This course introduces fundamental graphic communication techniques and theory. These techniques are further examined within a historical and practical context. Software is also introduced in this course. This studio course explores hand skills by using tools and techniques to produce professional presentations as well as the correct procedures for presenting designs to a client.

ARTS 3361. GRAPHIC DESIGN II  
This studio course teaches students how to develop creative strategies for problem solving in a client-based environment. This studio focuses on two-dimensional design as it applies to branding/corporate identity design, poster design and advertising design.

ARTS 3362. INTERACTIVE DESIGN  
This studio course teaches students how to develop creative strategies for problem solving in a client-based environment. This studio explores the use of the world wide web and other interactive media as a creative outlet for portfolio development, advertising design and business to business design.

ARTS 3365. INTERMEDIATE PHOTOGRAPHY  
An introductory studio course in traditional camera use, basic darkroom photographic processes and techniques. Prior completion of ARTS 2356 is recommended.

*ARTS 4301. ADVANCED DRAWING  
Emphasis on the development of content through drawing. Prerequisite: ARTS 3301.

*ARTS 4302. ADVANCED PRINTMAKING  
Assumes competencies attained in ARTS 3302.

*ARTS 4303. ADVANCED PAINTING  
Assumes competencies attained in ARTS 3303.

*ARTS 4304. ADVANCED SCULPTURE  
Assumes competencies attained in ARTS 3304.

*ARTS 4324. ADVANCED CERAMICS  
Assumes competencies attained in ARTS 3324.

ARTS 4350. PRE-COLUMBIAN ART OF MESOAMERICA  
Explores the history of Pre-Columbian art from Mexico and Central America, from the Olmec through the Aztec cultures.

ARTS 4352. MODERN ART OF MEXICO  
Explores the history of art during the nineteenth and twentieth centuries in Mexico.

ARTS 4361. GRAPHIC DESIGN III  
This studio course teaches students how to develop creative strategies for problem solving in a client-based environment. This studio focuses on two-dimensional and three-dimensional design as it applies to packaging design, publication design and design for social awareness.

ARTS 4362. PORTFOLIO AND PROFESSIONAL PRACTICES  
This seminar course teaches students the importance of self-promotion while focusing on professional practices. Guest speakers will join the class for discussion, critique and lecture pertaining to various facets of the fine art and digital art professions. Students will develop printed and digital portfolios, a resume, artist statement, set professional goals for their work.
*ARTS 4365.  3 sem. hrs.
ADVANCED PHOTOGRAPHY
Assumes competencies attained in ARTS 3365. Covers content as creative expression in addition to basic photographic skills.

ARTS 4390.  3 sem. hrs.
TOPICS IN ART
May be repeated when topics vary.

ARTS 4396.  1-3 sem. hrs.
DIRECTED INDIVIDUAL STUDY
See College description. Offered on application.

ARTS 4398.  3 sem. hrs.
APPLIED EXPERIENCE
See College description. Offered on application.
* May be taken three times for credit.

ASTRONOMY (ASTR)___________________

ASTR 1311.  3 sem. hrs. (2:2)
INTRODUCTION TO SPACE SCIENCE
A survey of astronomy and space science from the time of the ancients to the search for extrasolar planetary systems. The course will cover human interpretations of space from the time of prehistoric peoples, through the Copernican revolution, to the modern tools of astronomical observation, rocketry, satellite communications, remote sensing, and exobiology. This course counts toward the natural science component of University Core Curriculum.

BILINGUAL/ESL/MULTICULTURAL
(BIEM)___________________________

BIEM 4344.  3 sem. hrs.
EDUCATIONAL PSYCHOLOGY AND THE BILINGUAL CHILD
Studies of the principles of educational psychology, testing, and assessment as applied to bilingual children.

BIEM 4345.  3 sem. hrs.
LANGUAGE ACQUISITION AND DEVELOPMENT
A study of language acquisition and development with special reference to implications for monolingual and bilingual learners.

BIEM 4349.  3 sem. hrs.
LINGUISTICS FOR BILINGUAL TEACHERS
A study of the phonological, morphological, syntactical, lexical, and semantic characteristics of contemporary Spanish and English. The course focuses on Spanish-English bilingualism.

BIEM 4351.  3 sem. hrs.
THE MINORITY CHILD
Introduces students to themes and issues associated with the education of the minority child; modes of learning in various curriculum subjects; relation of materials and methods to affective and cognitive aspects of learning; information concerning the learning strengths and needs of children from various minority groups. (May be used to satisfy COE multicultural requirement.)

BIEM 4355.  3 sem. hrs.
LANGUAGE ARTS STUDIES IN THE BILINGUAL CURRICULUM
Basic methodological strategies and assessment skills required to teach language arts in the elementary bilingual classroom are provided. Emphasis is on teaching in Spanish.

BIEM 4356.  3 sem. hrs.
CONTENT AREA STUDIES IN THE BILINGUAL CURRICULUM
The concepts and skills required to teach health, mathematics, science, and social studies in the elementary bilingual classroom are provided.

BIEM 4357.  3 sem. hrs.
METHODS OF TEACHING ENGLISH AS A SECOND LANGUAGE
Studies in methodology and techniques available for teaching those whose native language is not English. Testing and assessment of English language learners will be integrated into the course.

BIEM 4360.  3 sem. hrs.
FOUNDATIONS IN BILINGUALISM
The philosophical and legal foundations of bilingual schooling in the United States through a sociohistorical approach. The rationale for bilingual education is examined, as are the basic program models. An overview of bilingual education in Texas is also provided.

BIEM 4393.  3 sem. hrs.
FIELD STUDIES IN FAMILY LITERACY
Field experiences designed to develop skills regarding the orientation of the adult population to bilingual/ESL purposes and philosophy, improving parental involvement, and English literacy skills.

BIEM 4696.  1-6 sem. hrs.
DIRECTED INDIVIDUAL STUDY
Programs will be designed for individual cases through special permission of the Department Chair and Dean. May be repeated for credit when the topic varies.

BIOL 1406 (BIOL 1406) 4 sem. hrs. (3:2)
BIOLOGY I
Presentation of basic biological concepts including scientific method, cytology, energetics, nucleic acids and genetics. This course is suitable for all majors. This course counts toward the natural science component of the University Core Curriculum.

BIOL 2200.  2 sem. hrs. (2:0)
PROFESSIONAL SKILLS
Presentation and discussion of selected topics relating to the professional skills of practicing scientists including literature searches, reviews,
paper presentation, professional opportunities and job requirements. Biology and Biomedical Science majors only; satisfies computer literacy requirements.

**BIOL 2371. 3 sem. hrs. (3:0)**

**PRINCIPLES OF EVOLUTION**
An overview of the structure and function of organisms in adapting to the environment. Provides a foundation for molecular, cellular, and organismal studies in the biological sciences. Prerequisite: BIOL 1407.

**BIOL 2401 (BIOL 2401) 4 sem. hrs. (3:2)**

**ANATOMY AND PHYSIOLOGY I**
Structure and function of the human body emphasizing biological chemistry, cell biology, tissues, and the integumentary, skeletal, muscular, and nervous systems. Prerequisite: BIOL 1406 (CHEM 1311/1111 strongly recommended.) Not recommended for Biology or Biomedical Sciences majors.

**BIOL 2402 (BIOL 2402) 4 sem. hrs. (3:2)**

**ANATOMY AND PHYSIOLOGY II**
Structure and function of the human body emphasizing blood, growth, development, genetics, and the endocrine, digestive, respiratory, cardiovascular, lymphatic, immune and urogenital systems. Prerequisites: BIOL 1406 and BIOL 2401 (CHEM 1311/1111 strongly recommended.) Not recommended for Biology or Biomedical Sciences majors.

**BIOL 2416 (BIOL 2416) 4 sem. hrs. (3:0:2)**

**GENETICS**
Principles of genetic transmissions and molecular basis of heredity and variation. Weekly recitation periods will involve team assignments, problem solving activities, and seminars. Prerequisites: BIOL 1406 with a grade of ‘C’ or above, 1407, CHEM 1311 and CHEM 1312.

**BIOL 2420 (BIOL 2420) 4 sem. hrs. (3:3)**

**PRINCIPLES OF MICROBIOLOGY**
Introduction to microorganisms with emphasis on those of importance in patient care. Principles of disinfection, sterilization, immunity. This class is intended for nursing majors; it cannot substitute for BIOL 2421. Prerequisite: BIOL 1406 or equivalent.

**BIOL 2421 (BIOL 2421) 4 sem. hrs. (3:3)**

**MICROBIOLOGY**
An introduction to microorganisms including the bacteria, fungi, and viruses. Laboratory involves microbiological techniques and development of basic laboratory skills. Prerequisites: BIOL 1406 with a grade of ‘C’ or above, BIOL 1407, CHEM 1311, CHEM 1312, or permission of instructor.

**BIOL 2472. 4 sem. hrs. (3:3)**

**PRINCIPLES OF BOTANY**
Introduction to the structure, function, diversity and application of plants. Laboratory focus on anatomical features, physiological adaptations, classification, and life cycles. Prerequisites: BIOL 1407, CHEM 1311 or consent of instructor.

**BIOL 3300. 3 sem. hrs. (3:0)**

**ANIMAL NUTRITION**
Examines the dietary requirements of both companion animals and livestock. Includes the anatomy, physiology and biochemistry of the gastrointestinal system, nutrient procurement and use, feed additives, growth stimulants, metabolic diseases, and diet therapy. Prerequisites: BIOL 1407 and CHEM 3411. Prerequisite or corequisite: CHEM 3412.

**BIOL 3345. CELL PHYSIOLOGY**
Emphasis on cellular functions that underlie physiological processes, transport across membranes, membrane potential and excitability, the cell nucleus, and organelles and their relationship to energy, metabolism, and transport mechanisms within the cell. Prerequisites: BIOL 2200 or BIMS 2200, BIOL 3410.

**BIOL 3403. MOLECULAR BIOLOGY**
Principles of molecular biology including advanced concepts of gene structure, expression, replication, and current molecular biology techniques. Laboratory emphasis is on cloning and recombinant DNA technology. Prerequisites: BIOL 2416 and BIOL 2421.

**BIOL 3410. CELL BIOLOGY**
Study of cellular architecture and function. Topics include membranes, transport, organelles, cytoskeleton, and signaling mechanisms. Interrelationships of structure, function, energy and metabolism are explored. Laboratory will emphasize basic techniques of cell biology. Prerequisites: BIOL 2416 and CHEM 3411.

**BIOL 3413. INVERTEBRATE ZOOLOGY**
Structure, life history, and evolution of the invertebrates with special emphasis on the phylogeny and ecological relationships of the major phyla. Laboratory will involve field trips and survey collections. Prerequisite: BIOL 1407.

**BIOL 3414. VERTEBRATE BIOLOGY**
Classification, natural history, and methods of collecting, preserving, and identifying vertebrates. Weekend field trip and individual studies required. Prerequisite: BIOL 1407.

**BIOL 3425. FUNCTIONAL ANATOMY**
General trends in morphological development and adaptation as demonstrated by the anatomy and embryology of living and extinct chordates. Prerequisite: BIOL 1407.

**BIOL 3428. PRINCIPLES OF ECOLOGY**
Introduction to the interrelationships of organisms and their environment. Population structure, community classification and regulation, and energy flow in ecosystems will also be covered. Laboratory sections will focus on experimental design and field techniques in ecology. Prerequisites: BIOL 1406 with a grade of ‘C’ or above, BIOL 1407. Prerequisite or corequisite: BIOL 2200.

**BIOL 3430. PHYSIOLOGY**
The study of physiological processes that are the product of complex interactions between tissues, organs and organ systems, with emphasis on the circulatory, respiratory, endocrine, muscular, digestive, and urogenital systems. Particular focus on homeostasis, and the role of the environment and evolution on organ systems. Prerequisites: BIOL 1407, BIOL 2200 or BIMS 2200.

**BIOL 3443. ENVIRONMENTAL BIOLOGY**
Historical, contemporary, and projected concerns of human activities on biological aspects of ecosystem...
functioning. Prerequisite: BIOL 1407 or consent of instructor.

**BIOL 3455. PLANT FORM AND FUNCTION**
Anatomy of vegetative and reproductive organs of plants, unique cellular features, development and differentiation of cell and tissue types. Emphasis on physiological mechanisms. Prerequisite: BIOL 1407 or consent of instructor.

**BIOL 3471. PADRE ISLAND ECOLOGY**
The interrelationships of plants and animals with their environment on Padre Island, the Laguna Madre, and the Gulf of Mexico. This course is for non-science majors only and cannot be applied towards a science degree.

**BIOL 3472. MARINE BIOLOGY**
Introduction to the biology and ecology of the common organisms inhabiting beaches, bays and oceans, particularly the Gulf of Mexico. Selected field trips to local marine environments and research facilities. Laboratory exercises are included. This course is for non-science majors and cannot be applied towards a science degree.

**BIOL 3479. PLANT ECOLOGY**
Structure, physiology, life cycles, and economic impact of plants. Factors influencing diversity, succession and ecological distribution of plants. Prerequisite: BIOL 1407.

**BIOL 4085. MAJOR FIELD TEST IN BIOLOGY**
The Major Field Test (MFT) in Biology is a national examination given in the Fall and Spring semesters only. It is a graduation requirement for all Biology and some Biomedical Sciences students. Students enroll in this course during the semester that they plan to take the MFT. There is no cost to the student for either this course or for the MFT. Admission is limited to students who have completed 90 or more semester credit hours. Graded: CR/NC.

**BIOL 4100 1 sem. hr. (1:0)**
**RESEARCH ETHICS AND PROFESSIONALISM**
A course designed to enhance the professionalism of undergraduate researchers. This course discusses the codified aspects of research ethics, including fabrication, falsification and plagiarism of data; assigning authorship, submitting manuscripts to more than one journal and management of lab teams. It also addresses careers in science, resume writing, producing the successful application and interviewing skills. Permission of instructor required.

**BIOL 4299. DIRECTED INDEPENDENT RESEARCH**
Independent laboratory- or field-based research project on topic of current interest. Project developed and funded in conjunction with a faculty advisor. Written report required. Prerequisites: Junior class standing, BIOL 1407 and CHEM 1312/1112 and consent of instructor. May be repeated for a maximum of 4 semester hours.

**BIOL 4301. EMBRYOLOGY**
Studies the events that occur just prior to and during gestation. Includes gametogenesis, chromosomal and single gene aberrations, teratology, and the development of the body systems. Prerequisite: BIOL 2416.

**BIOL 4304. BIOLOGY OF VIRUSES**
Introduction to the study of viruses, including viral life cycles, replication schemes and Baltimore classification of representative bacteriophages, plant and animal viruses. Prerequisites: BIOL 2416, BIOL 2421 and CHEM 1311/1111.

**BIOL 4319. MARINE MAMMALS**
A taxonomic overview of the marine mammal group including representative life histories of selected species, their distribution and behavior, and the management/conservation and stranding network efforts. Prerequisite: BIOL 1407 or consent of instructor.

**BIOL 4326. TOXIC AND THERAPEUTIC PLANTS**
Anatomy and physiology of green plants toxic to humans and plants used in treating specific medical conditions. Prerequisite: BIOL 1407.

**BIOL 4340. GENOMICS, PROTEOMICS AND BIOINFORMATICS**
An introduction to integrative biological study using genome-wide approaches and bioinformatics. The “-omics” technologies (Genomics, Proteomics, Metabolomics, etc.) will be surveyed for current and potential contributions to understanding biological function at molecular, cellular, organismal and ecosystem levels. Prerequisites: BIOL 2416 and either BIOL 3410 or CHEM 4401.

**BIOL 4350. RESEARCH AND DESIGN**
Course will include experimental design, literature review of a research topic and laboratory work on the research topic. Prerequisite: consent of instructor.

**BIOL 4370. MARICULTURE**
Survey of the physiological, behavioral, environmental, and economic parameters governing the culture of selected aquatic species. Included are techniques employed worldwide to produce aquatic products. Prerequisite: BIOL 1407 or consent of instructor.

**BIOL 4371. POPULATION GENETICS**
An introduction to evolutionary processes and their genetic basis, this course focuses on theoretical and experimental approaches to the study of population genetics, quantitative genetics, evolutionary ecology,
and molecular evolution. Prerequisites: BIOL 2416 and
either MATH 1442 or MATH 2342 or MATH 1470 or
MATH 2413 or permission of instructor.

BIOL 4396. 1-3 sem. hrs. (1-3:0)
DIRECTED INDEPENDENT STUDY
Research in areas of current interest. Written report re-
quired. Prerequisites: BIOL 1407 and CHEM 1312/1112
and consent of instructor. May be repeated for a maximum
of 6 semester hours.

BIOL 4405. 4 sem. hrs. (3:3)
LIMNOLOGY
The study of the functional relationships and produc-
tivity of aquatic communities as they are affected by
their physical, chemical, and biotic environment. The
influence of man’s activities on these systems will be
the focus of the course. Prerequisite: BIOL 3428 or
consent of instructor.

BIOL 4406. 4 sem. hrs. (3:3)
IMMUNOLOGY
An overview of immunology with emphasis on current
knowledge of the immune system. Detailed examination of
the specific cells, cytokines, antibodies, and molecules
that comprise the immune system. Laboratory exercises
demonstrate the basic principles and techniques used in
immunologic studies. Prerequisite: BIOL 2421 (BIOL
3410 or 3345 recommended.)

BIOL 4407. 4 sem. hrs. (3:3)
BIOLOGY OF THE FUNGI
Overview of the fungi, including their characteristics,
diversity, and ecology. Interactions between fungi and
other organisms are explored along with the role and
importance of the fungi. Prerequisite: BIOL 2421.

BIOL 4408. 4 sem. hrs. (3:3)
MICROBIAL DIVERSITY AND ECOLOGY
Biodiversity and roles of microorganisms in natural
environments. Interactions with other micro- and macro-
or-organisms (humans, animals and plants) and with abiotic
factors. Unique abilities of microorganisms such as ni-
trogen fixation and adaptation to extreme environments.
Prerequisite: BIOL 2421 or consent of instructor.

BIOL 4409. 4 sem. hrs. (3:3)
FIELD AND SAMPLING TECHNIQUES
The study of techniques required for proper field work in
the biological sciences. The course includes ecological
sampling methods, safety, logistics, equipment operation
and maintenance and travel concerns. Prerequisite:
consent of instructor.

BIOL 4411. 4 sem. hrs. (3:2)
ANIMAL BEHAVIOR
An understanding of why animals behave in the manner
they do, through examination of both invertebrate and
vertebrate species. Prerequisite: BIOL 1407.

BIOL 4413. 4 sem. hrs. (3:3)
ENTOMOLOGY
A broad overview of the natural history, classification,
phylogeny, ecology, behavior, development and
physiology of insects and their kin. The lab will involve
field work, collection and curation. Prerequisite: BIOL
3413 or consent of instructor.

BIOL 4422. 4 sem. hrs. (3:3)
PLANT TAXONOMY
Principles and practice in the classification of flowering
plants. Field trips are required. Prerequisite: BIOL
1407.

BIOL 4425. 4 sem. hrs. (3:3)
ORNITHOLOGY
Systematics, anatomy, physiology, ecology, behavior, and
field identification of birds. Prerequisite: BIOL 3414 or
consent of instructor.

BIOL 4428. 4 sem. hrs. (3:3)
FISHERIES BIOLOGY
A study of theory and techniques in fisheries science,
including behavior of fisheries populations and ap-
lication to resource management with emphasis in tide-influenced waters. Includes readings in the current
literature and a research project. The lab will emphasize
practical fisheries sampling designs and techniques.
Prerequisite: BIOL 1407.

BIOL 4429. 4 sem. hrs. (3:3)
MARINE BOTANY
The ecology of marine plants with emphasis on
identification, life histories, and environmental factors
of distribution. Prerequisite: BIOL 1407.

BIOL 4431. 4 sem. hrs. (3:3)
MAMMALOGY
Systematics and ecology of mammals. Prerequisite: BIOL
3414 or consent of instructor.

BIOL 4432. 4 sem. hrs. (3:3)
ICHTHYOLOGY
Systematics, evolution, biology, and ecology of fishes.
Laboratory identification of marine and freshwater fishes
collected during field excursions. Prerequisite: BIOL
3414 or consent of instructor.

BIOL 4433. 4 sem. hrs. (3:3)
PARASITOLOGY
An introduction to parasitology with emphasis on internal parasites and appropriate references to human
endoparasites and parasites of veterinary importance.
Prerequisite: BIOL 2421 or consent of instructor.

BIOL 4435. 4 sem. hrs. (2:4)
BIOLOGICAL MICROTECHNIQUES
Theory and techniques of processing specimens for
histochemistry and microscopic examination. Laboratory
includes preparation of tissues and small specimens for
analysis and display. Prerequisites: CHEM 3411 and
BIOL 1407.

BIOL 4436. 4 sem. hrs. (3:2)
MARINE ECOLOGY
Habitats and community structure in marine environ-
ments; biotic and abiotic factors governing the distribution
of marine organisms. Prerequisite: BIOL 3414.

BIOL 4442. 4 sem. hrs. (3:3)
HERPETOLOGY
Systematics, ecology, and behavior of amphibians
and reptiles. Prerequisite: BIOL 3414 or consent of
instructor.

BIOL 4444. 4 sem. hrs. (3:3)
ESTUARINE ORGANISMS
Systematics, distribution, and ecology of estuarine
macrofauna and macroflora. Weekend field trips and
individual study required. Prerequisite: BIOL 3413.

BIOL 4590. 1-5 sem. hrs. (1:0-3:4)
SELECTED TOPICS
Variable content. May be repeated for credit. Prerequisite:
Consent of the instructor. Offered on sufficient
demand.
The numbers of weekly lecture and laboratory hours associated with each course are designated (lecture:lab) following the semester hours. Additional laboratory work may be required to complete the assignments. All courses involving labs and field trips will require appropriate fees.

**BIMS 2171.** 1 sem. hr. (1:0)
**MEDICAL TERMINOLOGY**
This course stresses familiarity with and facility in scientific terminology. Areas of focus include: an introduction to scientific terminology, word analysis, etymologies, spelling and pronunciation. Prerequisite: BIOL 1407.

**BIMS 2172.** 1 sem. hr. (1:0)
**INTRODUCTION TO BIOMEDICAL CAREERS**
Strategies and requirements for successfully applying to graduate and professional schools. This course includes discussions, presentations and field trips to graduate and professional schools. Limited to freshman and sophomore students with permission of the instructor.

**BIMS 2220.** 2 sem. hrs. (2:0)
**PROFESSIONAL SKILLS**
Presentation and discussion of selected topics relating to the professional skills of practicing scientists including literature searches, reviews, paper presentation, professional opportunities and job requirements. Biomedical Sciences and Biology majors only; satisfies computer literacy requirements.

**BIMS 3102.** 1 sem. hr. (0:3)
**ESSENTIALS LABORATORY FOR CLINICAL LABORATORY SCIENCE**
Application of essential practices for clinical laboratory science. Pre-requisite or Co-requisite: BIMS 3202.

**BIMS 3103.** 1 sem. hr. (0:3)
**ESSENTIALS LABORATORY FOR FORENSIC SCIENCE**
Application of essential practices for forensic science. Pre-requisite or Co-requisite: BIMS 3202.

**BIMS 3202.** 2 sem. hrs. (2:0)
**ESSENTIALS FOR APPLIED LABORATORY SCIENCES**
Introduction to general laboratory procedures, laboratory safety and regulations, quality assurance, professional ethics, specimen acquisition, sample maintenance and microscopy. Includes an introduction to the health care, public health and criminal investigation system. Prerequisites: BIOL 1407 and CHEM 1312/1112.

**BIMS 3300.** 3 sem. hrs. (3:0)
**ANIMAL NUTRITION**
Examines the dietary requirements of both companion animals and livestock. Includes the anatomy, physiology and biochemistry of the gastrointestinal system, nutrient procurement and use, feed additives, growth stimulants, metabolic diseases, and diet therapy. Prerequisites: BIOL 1407 and CHEM 3411. Prerequisite or corequisite CHEM 3412.

**BIMS 3320.** 3 sem. hrs. (2:2)
**SURVEY OF FORENSIC SCIENCE**
A survey of the methods and materials used to gather and process evidence at potential crime scenes. Students are introduced to the legal rules of evidence and their practical ramifications during scientific criminal investigations. In laboratory, students use commonly available processing items and tools to investigate a simulated crime scene.

**BIMS 3325.** 3 sem. hrs. (3:0)
**PROFESSIONAL PRACTICE IN FORENSIC SCIENCE**
An introduction to industry standards and ethics for professional forensic scientists. This course analyzes cognitive processes, scientific methods and quality control/quality assurance issues in forensic investigations. It also stresses maintaining credibility in an adversarial legal system through the development of technical/scientific speaking and writing skills. Prerequisite BIMS 3320.

**BIMS 3401.** 4 sem. hrs. (4:0)
**PATHOPHYSIOLOGY**
This course is a study of the biological basis of human disease. It includes an investigation of inflammation, immunity, and neoplasia, as well as the more common presenting dysfunctions of body systems. Prerequisites: CHEM 1311 and BIOL 1407 or BIOL 2401.

**BIMS 3403.** 4 sem. hrs. (3:3)
**MOLECULAR BIOLOGY**
Principles of molecular biology including advanced concepts of gene structure, expression, replication, and current molecular biology techniques. Laboratory emphasis is on cloning and recombinant DNA technology. Prerequisites: BIOL 2416 and BIOL 2421.

**BIMS 4111.** 1 sem. hr. (1:0)
**CONTEMPORARY SCIENTIFIC READINGS**
Students read one non-fiction book per month addressing some aspect of medicine, science or history (four books per semester), then meet once per month to discuss, analyze and defend their perceptions about the book. Only open to students accepted into the Partnership for Primary Care and the Joint Admissions Medical Program (JAMP), those who are seeking admission into JAMP by participating in the pre-JAMP and students in other sponsored programs. This course may be repeated once for full credit in subsequent semesters.

**BIMS 4170.** 1 sem. hr. (1:0)
**BIOMEDICAL SEMINAR**
A series of seminars on current topics of biomedical research. This course may be repeated once for full credit in subsequent semesters. Prerequisite: BIOL 1407.

**BIMS 4182.** 1 sem. hr. (1:0)
**SEMINAR – CLINICAL CORRELATIONS**
Informal lectures covering the newest developments in laboratory medicine. Includes discussion of the patient’s clinical laboratory results, selection and interpretation of laboratory tests, and presentation of research. Requires permission of instructor.

**BIMS 4295.** 2 sem. hrs.
**BIOMEDICAL PRACTICUM**
Supervised learning experience with a community professional in health care (e.g., physician, dentist, veterinarian, chiropractor, pharmacist, physician assistant or physical therapist) or forensic science. On-campus meetings, oral and written reports are required. (Cannot be taken by Clinical Laboratory Science students in lieu of BIMS 4297.) This course may be repeated once for full credit in subsequent semesters. Requires permission of instructor.

**BIMS 4297.** 2 sem. hrs
**PROFESSIONAL PRACTICUM I**
Supervised learning experience in selected departments of the clinical laboratories. Clinical Laboratory Science students only. Requires permission of instructor.
BIMS 4299. 1-2 sem. hrs. (0:10-20)
DIRECTED INDEPENDENT RESEARCH
Independent laboratory- or field-based research project on topic of current interest. Project developed and funded in conjunction with a faculty advisor. Written report required. Prerequisites: Junior class standing, BIMS 1407 and CHEM 1312/1112 and consent of instructor. May be repeated for a maximum of 3 semester hours.

BIMS 4311. 3 sem. hrs.
BIOL OGY OF CANCER
This course is a study of the profile of a cancer cell, and the various causes of human cancer. Contribution of heredity, environmental factors, and infectious agents to oncogenesis will be studied. Cancer screening, diagnosis, and treatment will be discussed. Various types of cancer will be presented. Prerequisite: BIOL 2416. BIOL 3410 is strongly recommended.

BIMS 4323. 3 sem. hrs. (3:0)
NEUROBIOLOGY
Studies the anatomy and physiology of the nervous system. Includes an examination of evolutionary trends in nervous system development, neural function, nerve impulse transmission, sensory and motor systems, behavior, emotional states, learning and memory. Particular emphasis is placed on human functioning. Prerequisite: BIOL 2416.

BIMS 4325. 3 sem. hrs. (2:3)
CLINICAL CHEMISTRY I
Principles and practice of procedures found in general clinical chemistry. Includes the methodology of diagnostic tests and normal and abnormal human physiology as applied to diagnosis of pathological conditions. Prerequisites: CHEM 4402 and BIMS 3430.

BIMS 4326. 3 sem. hrs. (3:0)
CLINICAL CHEMISTRY II
Continuation of BIMS 4325. Emphasis on advanced clinical chemistry topics and procedures. Prerequisite: BIMS 4325.

BIMS 4327. 3 sem. hrs. (3:0)
INTRODUCTION TO TOXICOLOGY
Principles of toxicology including absorption and excretion, biotransformation, chemical carcinogenesis, developmental toxicology and toxic agents. Prerequisites: BIOL 1407 and CHEM 1312.

BIMS 4330. 3 sem. hrs. (3:0)
 BIOLOGICAL BASIS OF AGING
Molecular aspects of aging and disease, including biological mechanisms and theories involving cells, tissues, and organ systems. Prerequisites: BIOL 1407 and CHEM 3411.

BIMS 4331. 3 sem. hrs. (2:3)
CLINICAL IMMUNOLOGY I
Theoretical aspects of the immune response and its relationship to the diagnosis of disease and immunohematology. Lecture and laboratory stress the detection, identification and characterization of antibodies, blood grouping and typing, compatibility testing, blood component therapy, HLA testing and diagnosis of pathological conditions. Prerequisite: BIMS 4406 or BIOL 4406.

BIMS 4332. 3 sem. hrs. (2:3)
CLINICAL IMMUNOLOGY II
Continuation of BIMS 4331. Emphasis on advanced clinical immunohematology and immunology topics and procedures. Prerequisite: BIMS 4331.

BIMS 4333. 3 sem. hrs. (3:0)
MEDICAL ENTOMOLOGY
An introduction to arthropods of medical and veterinary importance with particular emphasis on the critical roles that they play in their host group’s health and well-being. Prerequisite: BIOL 1407.

BIMS 4334. 3 sem. hrs. (3:0)
HUMAN GENETICS
Introduction to the genetic aspects of health and disease. Classic Mendelian and chromosomal disorders are examined as well as the relationship of genetic predisposition to the healthy state and to diseases/conditions. Prerequisites: CHEM 3412 and BIOL 2416.

BIMS 4335. 3 sem. hrs. (3:0)
ENDOCRINOLOGY
Basic biochemical and molecular aspects of hormone physiology, basic endocrine function and hormone action, immune-endocrine interactions, and clinical examples of the outcomes of abnormal function in human disease. Prerequisites: BIMS 2200 or BIOL 2200, CHEM 3412 and BIOL 2416.

BIMS 4340. 3 sem. hrs. (3:0)
FORENSIC SCIENCE IN CRIMINAL LAW
Students will learn legal procedures, rules of evidence, and applications of forensic science in the area of criminal law. Students will also develop skills in report writing and testifying in court. Prerequisite: BIMS 3320.

BIMS 4365, 3 sem. hrs. (2:3)
HEMATOLOGY I
Studies of the formation, function and identifying characteristics of the cellular elements of human blood and other body fluids in health and diseased states and laboratory studies on blood coagulation. Lecture and laboratory emphasize the enumeration, morphology and staining characteristics of normal and abnormal cells and hemostasis. Prerequisite: BIOL 3430.

BIMS 4366. 3 sem. hrs. (2:3)
HEMATOLOGY II
Continuation of BIMS 4365. Emphasis on advanced topics in hematology. Prerequisite: BIMS 4365.

BIMS 4370. 3 sem. hrs. (2:3)
MEDICAL BACTERIOLOGY
Lecture and laboratory studies of common pathogenic bacteria. Emphasis is on staining, cultural, and differential biochemical characteristics, methods of isolation from body fluids and susceptibility to therapeutic agents. Prerequisite or Co-requisite: BIMS 4374.

BIMS 4374. 3 sem. hrs. (3:0)
MEDICAL MICROBIOLOGY
Study of common human pathogenic organisms. Includes bacterial, parasitic, viral and fungal infections with emphasis on pathogenesis and treatment. Prerequisite: BIOL 2421.

BIMS 4375. 3 sem. hrs. (3:0)
MECHANISMS OF MICROBIAL PATHOGENESIS
Studies of how microorganisms invade the host and produce pathological symptoms associated with diseases. Emphasis is on the interaction between various host cells and pathogens, especially molecular mechanisms of pathogenesis and host immune responses. Prerequisite: BIOL 2421.
BIMS 4378. 3 sem. hrs. (2:3)
ADVANCED MEDICAL MICROBIOLOGY
Lecture and laboratory studies of parasitic, viral, mycological and unusual bacterial human pathogens. Emphasis on methods of isolation from body fluids, identification methods and correlation with pathology. Prerequisite or Co-requisite: BIMS 4374.

BIMS 4380. 3 sem. hrs. (3:0)
INTRODUCTION TO THE CLINICAL LABORATORY PROFESSION
Studies of the latest instrumentation, instrument selection, basic research, quality assurance and statistics used in the clinical laboratory. Prerequisites: BIMS 3302 and CHEM 4402. Permission of instructor and application required.

BIMS 4382. 3 sem. hrs. (2:3)
ADVANCED MEDICAL LABORATORY PROCEDURES
Lecture and laboratory studies of the newest development in laboratory diagnostic medicine. Includes advanced clinical chemistry, immunology and molecular diagnostic procedures. Prerequisites: BIMS 4406 or BIOL 4406, CHEM 4402, and PHYS 1402. Permission of instructor and application required.

BIMS 4384. 3 sem. hrs. (3:0)
PROFESSIONAL SKILLS FOR CLINICAL LABORATORY SCIENTISTS
Study of the role of the medical laboratory professional in the health care system. Includes professional ethics, legal responsibility, medical laboratory management, instructional methods, evaluation of clinical laboratory methods, medical laboratory instrument selection, clinical research and current professional topics. Satisfies computer literacy requirements. Permission of instructor and application required.

BIMS 4396. 1-3 sem. hrs. (1-3:0)
DIRECTED INDEPENDENT STUDY
Research in areas of current interest. Written report required. Prerequisites: BIOL 1407 and CHEM 1312/1112 and consent of instructor. May be repeated for a maximum of 6 semester hours credit.

BIMS 4406. 4 sem. hrs. (3:3)
IMMUNOLOGY
An overview of immunology with emphasis on current knowledge of the immune system. Detailed examination of the specific cells, cytokines, antibodies, and molecules that comprise the immune system. Laboratory exercises demonstrate the basic principles and techniques used in immunologic studies. Prerequisite: BIOL 2421 (BIOL 3410 or 3345 recommended).

BIMS 4410. 4 sem. hrs. (3:3)
HISTOLOGY
The study of cells and tissues, especially the manner in which they are organized to form organs and systems. Laboratories involve intensive use of the microscope to identify cells, tissues and organs. Prerequisites: BIOL 3425.

BIMS 4590. 1-5 sem. hrs. (1:0:3:4)
SELECTED TOPICS
Variable content. May be repeated for credit. Prerequisite: Consent of the instructor. Offered on sufficient demand.

BIMS 4598. 5 sem. hrs.
PROFESSIONAL PRACTICUM II
Continuation of BIMS 4297. Requires permission of instructor and application.

BIMS 4599. 5 sem. hrs.
PROFESSIONAL PRACTICUM III
Continuation of BIMS 4598. Requires permission of instructor and application.

BUSINESS ADMINISTRATION (BUSI)

BUSI 0001. 0 sem. hrs.
COB STUDENT CODE OF ETHICS AND PLAGIARISM
The emphasis of this non-credit, web-based course is educational. It covers the provisions in the COB Student Code of Ethics and covers information related to the issue of plagiarism. It prepares business majors to successfully complete an online test to meet a requirement for graduation. Prerequisites: students must have officially declared a major offered by the College of Business.

BUSI 0088. 0 sem. hrs.
MAJOR FIELD TEST REVIEW
This non-credit, web-based course assists students in their preparation for the Major Field Test (MFT) and includes modules and review questions in the eight content areas of the MFT: accounting, economics, finance, management, quantitative analysis and information systems, marketing, and the legal/social environment of business. International business issues are included across the seven modules listed above. Prerequisites: All business core courses except MGMT 4388. Concurrent enrollment in MGMT 4388 is required.

BUSI 1310 (BUSI 1301) 3 sem. hrs.
INTRODUCTION TO THE BUSINESS ENVIRONMENT
An overview of the nature of business and its environment. Emphasizes the dynamic role of business in everyday life and its importance to society. Not open to Juniors or Seniors majoring in business.

BUSI 3301. 3 sem. hrs.
CONTEMPORARY BUSINESS TOPICS
A study of contemporary issues facing business and/or the business student. May be repeated for credit when topic varies. Prerequisites: Junior standing or above, and others depending on topic. Contact the Dean’s office for information.

BUSI 3315. 3 sem. hrs.
INTRODUCTION TO ENTREPRENEURSHIP
This is an initial course in entrepreneurship. Description and analysis of the history, philosophy, psychological/personal characteristics, organizational characteristics, business and societal planning tools, and practices of entrepreneurs and the firms which are created and maintained by entrepreneurs. Factors inside and outside the entrepreneurial firm are also considered as they affect and influence successful business decisions. Prerequisites: BUSI 1310 or MGMT 3312, Junior standing or above and/or permission of the instructor for non-business majors.

BUSI 4310. 3 sem. hrs.
INTERNATIONAL BUSINESS
An understanding of international business including its importance in today’s world, the evolution of international institutions and the monetary system, the differences and
similarities among nations and cultures, and the special characteristics of the business functions in a global setting. Prerequisite: Junior standing or above.

**BUSI 4320. 3 sem. hrs.**
**NEW VENTURE CREATION**
New venture creation teaches students how to analyze the feasibility of a new product, service or innovation within the entrepreneurial organization. Students learn to develop business plans necessary for the creation of start-up enterprises to include specific business practices, finances, and obligations of the firms created and maintained by entrepreneurs. Factors inside and outside the entrepreneurial enterprise are researched and analyzed as they affect successful new venture business decisions. Prerequisites: BUSI 3315 or MGMT 3312, Junior standing or above and/or permission of the instructor for non-business majors.

**BUSI 4396. 3 sem. hrs.**
**DIRECTED INDIVIDUAL STUDY**
Individual supervised study and a final report. Prerequisites: permission of instructor, Junior standing or above, and others depending on selected topic. Inquire at the Dean’s office for information.

**BUSINESS LAW (BLAW)_______________**

**BLAW 3310. 3 sem. hrs.**
**LEGAL ENVIRONMENT OF BUSINESS**
An introduction to the legal systems of government, business and society. Includes coverage of ethics, the judicial process, basics of contracts law, constitutional issues, business torts and crimes, creditor/debtor relationships, business organizations, international law, environmental law, and various aspects of regulation of business. Prerequisite: BUSI 0011.

**BLAW 3320. 3 sem. hrs.**
**LAW FOR PERSONAL BUSINESS**
A study of the laws that influence each individual in the conduct of personal life and business affairs. Includes such topics as the court and legal system, family law, torts, property law, insurance, wills and trusts, contracts, and other areas of current interest. Prerequisite: Junior standing or above.

**BLAW 4342. 3 sem. hrs.**
**LAW FOR PROFESSIONAL CERTIFICATION**
Designed as a second course in business law for students who desire a more in-depth knowledge. Individuals planning to take professional certification exams that contain a business law component are encouraged to enroll in this course. Prerequisites: BLAW 3310 (or permission of instructor) and Junior standing or above.

**BLAW 4350. 3 sem. hrs.**
**HUMAN RESOURCE LAW**
A study of the laws relating to human resource management in today’s business environment. Covers discrimination, labor law, retirement regulations, safety issues and employee/management topics. Emphasis on current issues, cases and legislation. May be used as a management major elective or business elective. Prerequisite: Junior standing or above.

**BLAW 4390. 1-3 sem. hrs.**
**CURRENT TOPICS IN BUSINESS LAW**
Selected topics for special study related to laws impacting business, organizations and human resources. May be repeated for credit when topics vary. Prerequisites: Junior standing or above, and others depending on topic. Contact the Dean’s office for information.

**BLAW 4396. 1-3 sem. hrs.**
**DIRECTED INDIVIDUAL STUDY**
Individual supervised study and a final report. Prerequisites: permission of instructor, Junior standing or above, and others depending on selected topic. Inquire at the Dean’s office for information.

**CHEMISTRY (CHEM)_______________**
Although there are stated prerequisites for almost every course, any course may be taken with permission of the instructor. The CHEM 1311 and CHEM 1312 classes presume high school chemistry. Lecture and laboratory hours per week are given in parentheses following credit hours listed for each course. For example, (3:0) denotes three lecture hours and no lab hours per week. Lab courses will have lab fees and possibly materials fees in addition to tuition charges.

**CHEM 1305 (CHEM 1305) 3 sem. hrs. (3:0)**
**INTRODUCTORY CHEMISTRY**
A one-semester principles course for students in non-science related majors covering the major concepts of chemistry (atomic structure, bonding, stoichiometry, elementary thermodynamics) and the role of chemistry in contemporary society (polymers, energy, pollution, etc.). Will not substitute for CHEM 1311. This course counts toward the natural science component of the University Core Curriculum. Either CHEM 1305 or CHEM 1311, but not both, may be applied towards the core requirement. Students desiring a laboratory experience may co-register for CHEM 1111.

**CHEM 1311 (CHEM 1311) 3 sem. hrs. (3:0)**
**GENERAL CHEMISTRY I**
The foundation course in chemistry. Stoichiometry, chemical equilibria, atomic structure, chemical bonding, periodic properties, thermodynamics, chemical kinetics, and descriptive chemistry of the elements. This course counts toward the natural science component of the University Core Curriculum. Either CHEM 1305 or CHEM 1311, but not both, may be applied towards the core requirement.

**CHEM 1311 (CHEM 1111) 1 sem. hr. (0:3)**
**GENERAL CHEMISTRY LAB I**
The laboratory course for CHEM 1311.

**CHEM 1312 (CHEM 1312) 3 sem. hrs. (3:0)**
**GENERAL CHEMISTRY II**
The continuation of CHEM 1311, the foundation course in chemistry. This course counts toward the natural science component of the University Core Curriculum. Prerequisite: CHEM 1311 and MATH 1314 or equivalent math competency.

**CHEM 1112 (CHEM 1112) 1 sem. hr. (0:3)**
**GENERAL CHEMISTRY LAB II**
The laboratory course for CHEM 1312. Qualitative analysis of inorganic ions may be included. Prerequisite: CHEM 1111.

**CHEM 2490. 1-4 sem. hrs.**
**SPECIAL TOPICS**
May be repeated for credit. Subject materials variable. Offered on sufficient demand.
CHEM 3411.
**ORGANIC CHEMISTRY I**
The structure, nomenclature, synthesis, reactions, and reaction mechanisms of the principal classes of organic compounds. Stereochemistry and spectroscopy of organic compounds. Laboratory involves separation and synthetic techniques and development of basic skills. Prerequisite: CHEM 1311/1111.

CHEM 3412.
**ORGANIC CHEMISTRY II**
A continuation of CHEM 3411. The course concludes with a survey of the structures of biomolecules. Laboratory involves spectroscopy and qualitative analysis techniques. Prerequisite: CHEM 3411.

CHEM 3417.
**QUANTITATIVE ANALYSIS**
A course in quantitative analysis, which includes chemical statistics and the use of acid-base, complexation, precipitation, and redox reactions to perform analyses and separations. Laboratory includes standard volumetric and gravimetric methods and development of basic quantitative techniques. Prerequisite: CHEM 1312.

CHEM 3418.
**INSTRUMENTAL ANALYSIS**
An introduction to instrumental methods of analysis: spectroscopy, chromatography, and electrochemical methods. Laboratory involves use of instrumentation in chemical analysis. Prerequisite: CHEM 1312.

CHEM 4085.
**MAJOR FIELD TEST IN CHEMISTRY**
The Major Field Test (MFT) in Chemistry is a national examination given in the Fall and Spring semesters only. It is a graduation requirement for all Chemistry students. Students enroll in this course during the semester that they plan to take the MFT. There is no cost to the student for either this course or for the MFT. Admission is limited to students who have completed 90 or more semester credit hours. Graded: CR/NC.

CHEM 4292.
**SENIOR CHEMISTRY SEMINAR**
Presentation and discussion of selected topics in chemistry. Includes literature searches and reviews, paper presentations, survey of professional opportunities and requirements, career guidance and job searching skills. Prerequisite: senior standing or consent of instructor.

CHEM 4320.
**DRUGS, TOXINS AND NATURAL PRODUCTS CHEMISTRY**
The chemistry and biological activity of pharmaceuticals, toxins and selected natural products. Examines how chemical structure relates to biological activity. Also examines action of antibiotics, chemotherapy agents, analgesics, steroids, and compounds targeting the central and peripheral nervous system. Prerequisite: CHEM 4401.

CHEM 4344.
**CHEMICAL OCEANOGRAPHY**
The study of the oceans and seas as a chemical system, including interactions with both the biota and the solid earth. Prerequisite: CHEM 1312.

CHEM 4350.
**POLYMER CHEMISTRY**
An advanced lecture course in organic chemistry. Characterization of polymers. Polymerization mechanisms. Current research directions such as biomedical applications and electroactive polymers. Prerequisite: CHEM 3412.

CHEM 4401.
**BIOCHEMISTRY I**
The structure and function of carbohydrates, lipids, proteins, and nucleic acids. An introduction to enzyme kinetics, cell membrane structure and biochemical signaling. Laboratory exercises demonstrate the basic principles and techniques used in Biochemistry. Prerequisites: CHEM 3412 and one year of Biology.

CHEM 4402.
**BIOCHEMISTRY II**
A continuation of CHEM 4401. Biochemical energetics, including glycolysis, fatty acid oxidation, amino acid oxidation, citric acid cycle, oxidative phosphorylation, photophosphorylation and photosynthesis. Carbohydrate, fatty acid and amino acid biosynthesis. Laboratory is a continuation of biochemical techniques. Prerequisite: CHEM 4401.

CHEM 4407.
**ADVANCED INORGANIC CHEMISTRY**
A survey of inorganic chemistry. Theories of atomic structure, covalent bonding, ionic solids, metallic solids, and coordination compounds. Modern acid-base concepts. Laboratory involves the synthesis of inorganic compounds. Prerequisite: CHEM 1312; Physical Chemistry is recommended.

CHEM 4409.
**ADVANCED INSTRUMENTAL ANALYSIS**
An advanced course in analytical chemistry covering the underlying theories of instrumental methods. Laboratory emphasizing the proper utilization of instruments in analysis and separation of chemical species. Prerequisites: CHEM 3411, CHEM 3412, and CHEM 3418.

CHEM 4420.
**PHYSICAL BIOCHEMISTRY**
The elements of physical chemistry applied to biological systems. Includes thermodynamics, kinetics, molecular structures, and the physical basis of biochemical techniques. Prerequisites: CHEM 4401, MATH 2413, and PHYS 1402 or PHYS 2426.

CHEM 4423.
**PHYSICAL CHEMISTRY I**
A fundamental approach to the study of physical and chemical phenomena, including the study of thermodynamics, gases and phase equilibria. Prerequisites: CHEM 1312, PHYS 1402 or PHYS 2426, MATH 2414.

CHEM 4424.
**PHYSICAL CHEMISTRY II**
A continuation of CHEM 4423, including the study of chemical kinetics, electrochemistry, molecular structure, and quantum mechanics. Prerequisite: CHEM 4423.

CHEM 4443.
**ENVIRONMENTAL CHEMISTRY**
A study of the impact of chemistry on the environment, including topics of air pollution, water pollution, and beneficial chemical modifications of the environment.
Laboratory devoted to field techniques of sampling, sample preservation, and analytical techniques applied to the environment. Prerequisite: CHEM 1312, CHEM 3411.

CHEM 4490. 1-4 sem. hrs.

SPECIAL TOPICS
May be repeated for credit. Subject materials variable. Offered on sufficient demand.

CHEM 4696. 1-6 sem. hrs.

DIRECTED INDEPENDENT STUDY
Requirements a formal proposal of study to be completed in advance of registration, to be approved by the supervising faculty, the chairperson, and the dean of the College.

COMMUNICATION (COMM)_____________________

COMM 1305. 3 sem. hrs.

FILM AND CULTURE
Introduction to film aesthetics, history, and criticism for non-communication majors. Establishes a vocabulary for examining films and their roles in American culture. Satisfies the university core curriculum requirement in fine arts.

COMM 1307 (COMM 1307) 3 sem. hrs.

MEDIA AND SOCIETY
History and development of mass media in the United States as well as the organizational, institutional, and cultural dynamics of today's major commercial media. Included are substantial components on print media, radio, television, cinema, and computer Internet communication systems. Course themes include media production and consumption, globalization, cultural imperialism, race, class, gender in media and popular culture.

COMM 1315 (SPCH 1315) 3 sem. hrs.

PUBLIC SPEAKING
Research, composition, organization, and delivery of speeches for various purposes and occasions, with emphasis on listener analysis and on informative and persuasive techniques. Satisfies the university core curriculum requirement in oral communication.

COMM 1318 (SPCH 1318) 3 sem. hrs.

INTERPERSONAL COMMUNICATION
Predominant issues related to verbal and nonverbal communication with a focus on interpersonal relationships.

COMM 1342 (SPCH 1342) 3 sem. hrs.

VOICE AND DICTION
Basic voice training, including techniques for vocal production, manipulation, and control. Practical application of the vocal apparatus will be emphasized, including techniques of enunciation, projection, articulation, and the use of dialects. (Credit may not be given for both this course and THEA 1342.)

COMM 1370. 3 sem. hrs.

INTRODUCTION TO COMMUNICATION
Overview of historical and contemporary trends in communication studies.

COMM 2333 (SPCH 2333) 3 sem. hrs.

SMALL GROUP COMMUNICATION
Application of small group theories and techniques as they relate to group process and interaction.

COMM 2350. 3 sem. hrs.

MEDIA WRITING AND PERFORMANCE
This course is designed to teach students articulation, pronunciation, effective writing and on-air performance techniques for commercials, PSAs, weather, sports, news, interviewing for various media environments with videotaped and audio taped presentations.

COMM 2366 (DRAM 2366) 3 sem. hrs.

INTRODUCTION TO FILM ART
Examination of the elements of film art, including cinematography, sound, and editing, in a variety of cinematic forms and styles.

COMM 3301. 3 sem. hrs.

TELEVISION CRITICISM
Exploration of how TV communicates through the study of programming content, production practices, and audiences. Includes a laboratory for screening assigned programs. Prerequisite: COMM 1307

COMM 3302. 3 sem. hrs.

FILM HISTORY
Development of the motion picture, 1895 to the present, with an emphasis on the narrative fictional film.

COMM 3310. 3 sem. hrs.

COMMUNICATION THEORY
The foundations, processes, and effects of human communication. A survey of contemporary theory and research, including language theory, nonverbal and small group communication, persuasion, and mass communication. Prerequisite: COMM 1307 and 1370.

COMM 3311. 3 sem. hrs.

NONVERBAL COMMUNICATION
The study of body movement, touch, paralanguage, space, environment, and other nonverbal factors in the communication process.

COMM 3312. 3 sem. hrs.

NEWSWRITING FOR TELEVISION, RADIO, AND THE INTERNET
News collecting, interviewing, writing, and editing, for television, radio, and the Internet.

COMM 3313. 3 sem. hrs.

INTRODUCTION TO VIDEO PRODUCTION
Basic principles and techniques of video production using digital video equipment.

COMM 3314. 3 sem. hrs.

TELEVISION PRODUCTION
Fundamentals of studio television production. Field-based course, transportation required.

COMM 3315. 3 sem. hrs.

VIDEO EDITING
This course will engage the student in the interpretation, analysis, and application of editing techniques using TV, film, commercials, experimental videos, documentaries, etc., and selected readings. Edited products resulting from this instruction will include a short narrative film, an abstract/experimental film, a commercial/public service announcement, and a short documentary film.

COMM 3330. 3 sem. hrs.

PERSUASION
Various theories and forms of rhetorical persuasion. Topics include practical reasoning skills, psychological theories of persuasion, and critical responses to persuasive messages.

COMM 3335. 3 sem. hrs.

UIL DEBATE AND SPEECH
Understanding the University Interscholastic League debate and speech events. Students explore approaches to analytical reasoning, research delivery, and the conceptual basis for debate and gain practical experience in understanding and judging UIL in the high school setting.
COMM 3340. PUBLIC RELATIONS TECHNIQUES 3 sem. hrs.
A study of the practices and problems of public relations with an emphasis on understanding the development of the field and the applications of communication skills necessary for being a successful public relations professional.

COMM 3351. SCREEN COMEDY 3 sem. hrs.
Examination of the varieties of film comedy, from silent comedy to contemporary forms, with some attention to the history and theory of comic performance.

COMM 3360. SCREENPLAY WRITING 3 sem. hrs.
Writing and analysis of the screenplay for narrative fictional films. Writing projects include problem-solving exercises and work on an original screenplay.

COMM 3380. NEW MEDIA AND COMMUNICATION 3 sem. hrs.
This course explores communication behavior in interactive media such as the Internet, online communities, and video games. Course topics include communication and critical theories and applying these theories to online communication contexts, web site development strategies, interactive narratives, and issues of identity construction, cybereculture, and information privacy. This course meets the University computer literacy requirement.

COMM 4310. ADVANCED DIGITAL FILM MAKING 3 sem. hrs.
Narrative and documentary video production for advanced students. May be repeated for credit. Prerequisite: COMM 3313 and 3314 or equivalent

COMM 4311. DOCUMENTARY FILM 3 sem. hrs.
Historical and critical study of the non-fictional film with attention to changing technologies, to varying uses and styles of documentary, and to contemporary critical and theoretical issues.

COMM 4314. GENDER COMMUNICATION 3 sem. hrs.
Examination of communication about women and men, as well as communication between them. Special course emphasis on explanations of gender, sexist language, media depiction of the sexes, and gender communication in the formation of social and work relationships. A service learning project may be a major component of this course.

COMM 4323. ORAL INTERPRETATION OF CHILDREN’S LITERATURE 3 sem. hrs.
A study, primarily through the medium of performance, of various types and forms of literature for children. Strongly oriented toward teaching literature in the elementary school classroom. (Credit may not be given for both this course and THEA 4323 or ENGL 4370.)

COMM 4330. PUBLIC RELATIONS CASES & STRATEGIES 3 sem. hrs.
A study of the key issues in the practices of public relations as a form of corporate discourse; exploration of nature, history, and present status of public relations.

COMM 4340. ADVERTISING CRITICISM 3 sem. hrs.
The examination of advertising history through critical and cultural approaches. Prerequisite: COMM 1307.

COMM 4345. INTERCULTURAL COMMUNICATION 3 sem. hrs.
An investigation of the process by which persons and groups of different cultural backgrounds create understanding. Types of knowledge, skills, and sensitivity necessary for intercultural communication are developed.

COMM 4350. COMMUNICATION IN ORGANIZATIONS 3 sem. hrs.
Examination and exploration of realistic applications of communication theories within the framework of an organization. Particular attention will be given to techniques for diagnosing communication problems, as well as strategies for effecting change in communication.

COMM 4371. ACTING FOR THE CAMERA 3 sem. hrs.
Emphasizes the practice of various acting styles for television, video, and film. The student will receive practical experience in commercial styles, public service announcements, television and video style acting, and film scene study. (Credit may not be given for both this course and THEA 4371.)

COMM 4390. TOPICS IN COMMUNICATION 3 sem. hrs.
Study of specialized topics and themes in communication studies and media studies. May be repeated when topics vary.

COMM 4395. LEGAL AND ETHICAL ISSUES IN COMMUNICATION 3 sem. hrs.
Examination of legal and ethical issues in speech communications and mediated communication, including First Amendment and free speech ideals, control and regulation of broadcasting, and obscenity in media. Prerequisite: COMM 1307 and 1370. Non-majors may be admitted with permission by the instructor.

COMM 4396. DIRECTED INDIVIDUAL STUDY 3 sem. hrs.
See College description. By application. Only 3 semester hours of Directed Individual Study credit may be counted toward the major. Prerequisite: Approval of Instructor.

COMM 4398. APPLIED EXPERIENCE 3 sem. hrs.
See College description. By application. Only 3 semester hours of Internship or Applied Experience credit may be counted toward the major. Prerequisite: Approval of Instructor.

COMM 4399. COMMUNICATION INTERNSHIP 3 sem. hrs.
Practical experience in the field through placement in a communication or media internship position. By application. May be taken 3 times for credit; however, only 3 semester hours of Internship or Applied Experience credit may be counted toward the major. Prerequisite: Approval of Instructor.

COMPUTER SCIENCE (COSC) _________

Most computer science courses are laboratory related and carry a laboratory fee. The numbers of weekly lecture and laboratory hours associated with each course are designated by (lecture: lab) following the semester hours. Additional laboratory work may be required to complete the assignments. We will make every effort to offer courses in the semesters listed below.
COSC 1315 (COSC 1300)  3 sem. hrs. (3:0)
COMPUTER LITERACY
A balanced introduction to the use and application of computers in modern society involving both descriptive information and hands-on laboratory participation. Includes a discussion of the general principles of operation of a computer and a brief history of the development of computing. The use of a personal computer operating system, common application software, and simple computer programming concepts are introduced. Satisfies university computer literacy requirement.

COSC 1325.  3 sem. hrs. (2:2)
INTRODUCTION TO INTERACTIVE DESIGN AND PROGRAMMING
Introduction to problem analysis, design of solutions, and graphical applications creation using a 3-D interactive environment. Emphasis is placed on problem solving skills and basic concepts of computer programming. This course is intended for those students with little or no background in computer programming. This course satisfies the University’s computer literacy requirement.

Prerequisites: None.

COSC 1435 (COSC 1436)  4 sem. hrs. (3:2)
INTRODUCTION TO PROBLEM SOLVING WITH COMPUTERS I
A broad introduction to many Computer Science topics including: algorithms, problem solving, operating system concepts, computer architecture, and programming languages. Prerequisite: MATH 1314 or placement beyond MATH 1314.

COSC 1436 (COSC 1437)  4 sem. hrs. (3:2)
INTRODUCTION TO PROBLEM SOLVING WITH COMPUTERS II
This course is a continuation of COSC 1435, completing the syntax of the language used as the programming tool in COSC 1435 and providing an introduction to basic data structures. It includes the intermediate study of the basic concepts of problem solving. Topics covered include basic one- and two-dimensional array handling, recursion, basic searching and sorting algorithms, abstract data types, and dynamic data structures. Prerequisite: COSC 1435.

COSC 2190.  1 sem. hrs. (2:0)
INTRODUCTION TO RESEARCH
This course introduces students to the fundamentals of research. Basic research methodologies are introduced. Students will research and study contemporary issues in computer science and present their work in oral and written formats. Class meets two hours per week. Prerequisite: COSC 1435. Spring.

COSC 2334.  3 sem. hrs. (3:0)
COMPUTER ARCHITECTURE
A concentrated study of internal computer concepts. Computer organization, machine and assembly language are emphasized. Prerequisite: COSC 1435. Fall, Spring.

COSC 2470.  4 sem. hrs. (3:2)
COBOL PROGRAMMING
A concentrated study of the COBOL language as applied to fundamental business computing problems and other data management applications. Prerequisite: COSC 1435. Co-requisite MATH 2305.

COSC 2437 (COSC 2415)  4 sem. hrs. (3:2)
DATA STRUCTURES
This course provides a thorough study of standard structures used in the storing and retrieving of data and the processes by which these structures are created and manipulated. Topics include: object oriented design, linked lists, classes, trees, hashing, stacks, queues, sorting, searching, and recursion. Prerequisites: COSC 1436. Co-requisite MATH 2305.

COSC 2437 (COSC 2415)  4 sem. hrs. (3:2)
DATA STRUCTURES
This course provides a thorough study of standard structures used in the storing and retrieving of data and the processes by which these structures are created and manipulated. Topics include: object oriented design, linked lists, classes, trees, hashing, stacks, queues, sorting, searching, and recursion. Prerequisites: COSC 1436. Co-requisite MATH 2305.

COSC 2437 (COSC 2415)  4 sem. hrs. (3:2)
DATA STRUCTURES
This course provides a thorough study of standard structures used in the storing and retrieving of data and the processes by which these structures are created and manipulated. Topics include: object oriented design, linked lists, classes, trees, hashing, stacks, queues, sorting, searching, and recursion. Prerequisites: COSC 1436. Co-requisite MATH 2305.

COSC 2390.  3 sem. hrs. (2:2)
SELECTED TOPICS FOR NON-COMPUTER SCIENCE MAJORS
Variable content. May be repeated for credit depending on topic. Offered on sufficient demand. Does not count toward total hours required for BS in Computer Science. Prerequisite: COSC 1315.

COSC 2900.  3 sem. hrs. (2:0)
SURVEY OF PROGRAMMING LANGUAGES
A study of selected programming languages for students familiar with programming. Students will write programs in a variety of languages. Prerequisite: COSC 2437. Fall.

COSC 2390.  3 sem. hrs. (2:2)
SELECTED TOPICS FOR NON-COMPUTER SCIENCE MAJORS
Variable content. May be repeated for credit depending on topic. Offered on sufficient demand. Does not count toward total hours required for BS in Computer Science. Prerequisite: COSC 1315.

COSC 2390.  3 sem. hrs. (2:2)
SELECTED TOPICS FOR NON-COMPUTER SCIENCE MAJORS
Variable content. May be repeated for credit depending on topic. Offered on sufficient demand. Does not count toward total hours required for BS in Computer Science. Prerequisite: COSC 1315.

COSC 2390.  3 sem. hrs. (2:2)
SELECTED TOPICS FOR NON-COMPUTER SCIENCE MAJORS
Variable content. May be repeated for credit depending on topic. Offered on sufficient demand. Does not count toward total hours required for BS in Computer Science. Prerequisite: COSC 1315.
COSC 3360. 3 sem. hrs. (3:0) HUMAN-COMPUTER INTERACTION
An introductory course covering principles of cognition of importance to human-computer interaction, basic concepts of the human-computer interface, including interface design and evaluation, modes of interaction (command, menu, iconic), understanding the behavior of the user, diversity in user interface design, user mental models, and anthropomorphisms. Course focus is on designing user-friendly web pages with active content. Prerequisite: COSC 1436. Fall, even years.

COSC 3370. 3 sem. hrs. (3:0) SOFTWARE ENGINEERING
This course introduces students to software engineering principles for the development and maintenance of high quality large software systems. Topics include: software life cycle, delivering on time and within budget, and the development and application of processes and tools for managing the complexities inherent in creating these systems. Prerequisite: COSC 2437. Fall, Spring.

COSC 3371. 3 sem. hrs. (3:0) COMPUTER INFORMATION SYSTEMS ECONOMICS
An introduction to concepts in information technology and software engineering with a focus on economics and managerial issues. Topics include cost benefit analysis, software and effort estimation, feasibility analysis, information systems proposals, software team coordination, and project management. May not be used as a CS elective for CS majors. Prerequisites: Junior Standing. Spring even years.

COSC 3380. 3 sem. hrs. (3:0) UNDERGRADUATE RESEARCH EXPERIENCE
Provides undergraduate students with a range of practical experiences in conducting real-world research. Students will communicate their ideas in oral and written forms. Students will interact with other students and professionals in ongoing research projects. Experience will be gained in all stages of research: proposing a project, designing an approach, and reporting results. Prerequisite: COSC 2190. Co-requisite: COSC 2437. Fall.

COSC 3400. 4 sem. hrs (4:0) SKILLS FOR COMPUTING PROFESSIONALS
This course focuses on the professional skills that computer scientists will need to be successful in their careers. There are two key areas of study, communication skills needed by computer scientists and their ethical responsibilities. Communication skills will include: technical writing from a computer science perspective, presentation skills, client interviewing, and reading technical articles. Ethical issues will be explored from a computer science perspective. Prerequisites: ENGL 1302 and COSC 2437. Fall, Spring.

COSC 4310. 3 sem. hrs. (3:0) DIGITAL FORENSICS
This course will introduce undergraduate students to the fundamentals of computer forensics and cyber-crime scene analysis. The various laws and regulations dealing with computer forensic analysis will be discussed. Students will be introduced to the emerging international standards for computer forensic analysis, as well as a formal methodology for conducting computer forensic investigations. Several Forensics tools such as Encase and FTK will be used to conduct digital forensics investigations. Prerequisite: COSC 2437.

COSC 4328. 3 sem. hrs. (3:0) COMPUTER GRAPHICS
Basic principles and techniques for computer graphics on modern graphics hardware. Students will gain experience in interactive computer graphics using the OpenGL API. Topics include: 2D viewing, 3D viewing, perspective, lighting, and geometry. Prerequisites: COSC 2437, MATH 2413. MATH 3311, Linear Algebra is recommended. Fall.

COSC 4330. 3 sem. hrs. (3:0) INTRODUCTION TO ARTIFICIAL INTELLIGENCE
Foundations, directions, and applications of artificial intelligence including search algorithms, knowledge acquisition, representation, and processing. Students will gain practical experience by implementing many of the basic algorithms. Prerequisite: COSC 2437 and MATH 2305. Spring, even years.

COSC 4342. 3 sem. hrs. (3:0) COMPUTER NETWORKS
Computer-based communication systems. Topics include: advanced computer network architectures, protocols, and programming. Prerequisites: COSC 3346, MATH 2413. Fall, Spring.

COSC 4343. 3 sem. hrs. (3:0) ALGORITHMS
Advanced programming techniques for algorithmic and heuristic solutions of problems. Topics include: analysis and design of algorithms, testing of algorithms, optimum and exhaustive solutions, and recursion. Prerequisites: COSC 2437, MATH 2305, MATH 2413. Spring, odd years.

COSC 4348. 3 sem. hrs. (3:0) SYSTEMS PROGRAMMING
The design and implementation of system software such as device drivers, application support libraries, and interprocess communication. Students will study and use systems programming tools. Prerequisites: COSC 3346, and either COSC 3353 or COSC 3324. Spring.

COSC 4353. 3 sem. hrs (3:0) COMPILER CONSTRUCTION
This course introduces the basic concepts and mechanisms traditionally employed in language translators, with emphasis on compilers. Topics include: strategies for syntactic and semantic analysis, techniques of code optimization and approaches towards code generation. Prerequisites: COSC 3353, MATH 2305. Spring odd years.

COSC 4354. 3 sem. hrs. (3:0) SENIOR CAPSTONE PROJECT
Teamwork and formal methods of systems analysis and design are emphasized. Students will complete a large group project. Prerequisites: COSC 3370 and COSC 3336. Fall, Spring.

COSC 4360. 3 sem. hrs. (3:0) THEORY OF PROGRAMMING LANGUAGES
The study of programming language design including syntax, semantics, behavior, and implementation issues in imperative, functional, logic, and object-oriented languages. Other topics include type theory, concurrency, data dependency, and nondeterminism. Prerequisite: COSC 2437. Fall odd years.
COSC 4370. 3 sem. hrs. (3:0)
MODELS OF COMPUTATION
A study of formal languages, grammars, and associated abstract machine models. Topics include regular and context-free languages and grammars, finite state automata, Turing machines, and the Chomsky hierarchy. Prerequisite: MATH 2305.

COSC 4396. 3 sem. hrs. (3:0)
DIRECTED INDEPENDENT STUDY
See College description. Offered on sufficient demand.

COSC 4590. 1-5 sem. hrs.
SELECTED TOPICS
Variable content. May be repeated for credit depending on topic. Offered on sufficient demand.

COSC 4690. 1-6 sem. hrs.
CONTRACTED FIELD EXPERIENCE IN COMPUTER SCIENCE
Individual contract agreement involving student, faculty, and cooperating agency to gain practical experience in off-campus setting. Grade will be Credit/No-Credit. Prerequisite: Approval by Department.

CRIMINAL JUSTICE (CRIJ)________
CRIJ 1301 (CRIJ 1301) 3 sem. hrs.
INTRODUCTION TO CRIMINAL JUSTICE
History and philosophy of criminal justice. Overview of criminal justice system: police, prosecution and defense, courts, trial process, and corrections as they affect the individual, as well as their impact on society. The definition, nature, and impact of crime. The functions of criminal justice agencies will be examined in relation to common analytical themes such as ethics and discretion.

CRIJ 1313 (CRIJ 1313) 3 sem. hrs.
THE JUVENILE JUSTICE SYSTEM
The administration of the juvenile justice process. Historical and philosophical origins of the juvenile justice system. A systematic analysis of problems and procedures at each stage of the process.

CRIJ 2328 (CRIJ 2328) 3 sem. hrs.
POLICE SYSTEMS AND PRACTICES
The history and development of police in America. Topics examined include: the police profession, organization of law enforcement systems, the policing role, police discretion, ethics, police-community interaction, current and future issues, and research findings.

CRIJ 3302. 3 sem. hrs.
POLICE AND SOCIETY
Examination of policing in a democratic society. A critical review of various professional and community influences on police behavior, together with a consideration of social problems created by such forces, and potential remedial actions.

CRIJ 3310. 3 sem. hrs.
THE JUDICIAL PROCESS
Examination of the civil and criminal legal systems and the roles played by political, social and economic factors in the administration of justice. Consideration of the roles and interests of litigants, defendants, police, attorneys, and the judiciary in the process.

CRIJ 3315. 3 sem. hrs.
CRIME PREVENTION

CRIJ 3320. 3 sem. hrs.
ISSUES IN CORRECTIONS
Analysis of contemporary developments, controversies and management concerns in the field of corrections. Includes examination of theoretical foundations of correctional policy.

CRIJ 3325. 3 sem. hrs.
COMMUNITY-BASED CORRECTIONS
Examination of the correctional strategies and facilities available in community settings including diversion programs, probation, parole, half-way houses, boot camps, and restitution centers.

CRIJ 3340. 3 sem. hrs.
COMPARATIVE CRIMINAL JUSTICE
Comparison of the police in selected countries with the U.S. criminal justice system. Particular emphasis on social, political, and economic factors in the development and change in law enforcement.

CRIJ 3350. 3 sem. hrs.
CRIMINAL JUSTICE MANAGEMENT
Study of criminal justice agencies from a management perspective. An examination of basic organizational concepts as they apply to the management of criminal justice agencies: purpose, structure, technology, leadership, relationships and rewards.

CRIJ 4310. 3 sem. hrs.
CONSTITUTIONAL LAW
A case study of American constitutional law based on the leading decisions of the U.S. Supreme Court. Examination of the evolution of judicial review and the development of due process and the protection of individual rights.

CRIJ 4311. 3 sem. hrs.
CRIMINAL LAW
Review of the influence of theory and philosophy of law on the development of American criminal law. Consideration of the functions of criminal law, elements of specific offenses, types of defenses, and legal reasoning.

CRIJ 4312. 3 sem. hrs.
LAW AND EVIDENCE
A detailed examination of the use, admissibility, and presentation of evidence. Issues and problems dealing with the rules of evidence and the theories on which those rules are based.

CRIJ 4313. 3 sem. hrs.
CRIMINAL PROCEDURE
A detailed examination of the legal constraints on investigation and prosecution of criminal offenses. Analysis of the Texas Code of Criminal Procedure and of Search and Seizure Law under the Fourth Amendment, as well as other due process issues arising under the Fifth and Sixth Amendments.

CRIJ 4320. 3 sem. hrs.
OFFENDER REHABILITATION
Theories of rehabilitation, treatment, and correction of criminal offenders. Includes analysis of the historical development of the rehabilitative ideal and contemporary controversies surrounding it, and a survey of therapeutic models and methods.
CRIJ 4321. 3 sem. hrs.
AMERICAN PRISONS AND PRISONERS
Analysis of the history, philosophy, and function of prisons. Examination of control and treatment of offenders in institutional settings. Focus is upon current developments, controversies and management problems.
CRIJ 4322. 3 sem. hrs.
CRIME AND PUNISHMENT IN LITERATURE
A study of selected literary classics that treat of crime and punishment. The works of literary artists from various cultures which describe experience with crime and the criminal justice system will be placed in historical and theoretical perspective.
CRIJ 4324. 3 sem. hrs.
WOMEN & CRIMINAL JUSTICE
An historical and ideological analysis of the role of women in the criminal justice system as offenders, reformers, and professionals.
CRIJ 4331. 3 sem. hrs.
JUVENILE DELINQUENCY
Examination of the nature and extent of juvenile crime today. Analysis of the history and theory of delinquency and society's response to it. (Credit may not be given for both this course and SOCI 4331.)
CRIJ 4335. 3 sem. hrs.
CRIMINOLOGY
An examination of the major sociological explanations for crime, criminal behavior, and the social responses to crime. (Credit may not be given for both this course and SOCI 4335.)
CRIJ 4340. 3 sem. hrs.
CRIMINAL INVESTIGATION
Critical examination of investigation methods and comparison of these to research methods. Advanced examination of investigative procedures, theory, supervision, and evaluative research. Some practical applications.
CRIJ 4345 3 sem hrs.
RESEARCH METHODS IN CRIMINAL JUSTICE
This course is designed to help students gain a working understanding of the research process with direct application to criminal justice research. Attention will focus on various aspects of the research process including quantitative and qualitative methods. Students will complete literature reviews, create research proposals, conduct observations/interviews, and construct surveys in addition to various assignments and activities. Prerequisite: CRIJ 1301 or CRIJ 1313.
CRIJ 4351. 3 sem. hrs.
POLICE SUPERVISION & MANAGEMENT
Study of contemporary theories of management and supervision as they relate to law enforcement. Management concerns considered include planning, motivation, organizational communication, discipline, productivity, ethics, conflict, and job stress.
CRIJ 4360. 3 sem. hrs.
DOMESTIC VIOLENCE
Violence involving acquaintance, spouse, child, and elder abuse is examined within a theoretical construct relating violence to social responses. Alternative causal theories, prevention, counseling, administration, innovative programs, and inter-agency coordination are addressed.
CRIJ 4390. 3 sem. hrs.
TOPICS IN CRIMINAL JUSTICE
May be repeated for credit when topics vary.
CRIJ 4396. 1-3 sem. hrs.
DIRECTED INDIVIDUAL STUDY
See College description. Offered on application.
CRIJ 4398. 3 sem. hrs.
APPLIED EXPERIENCE
See College description. Offered on application.

DANCE (DANC)

DANC 1141 (DANC 1141) 1 sem. hr.
BALLET I
A beginning ballet dance course aligned with the Theatre, Dance, and Musical Theatre disciplines. The student will learn fundamentals of classical ballet; terminology, alignment, barre and floor technique, as well as genres of the contemporary styles. May be repeated for credit.
DANC 1147 (DANC 1147) 1 sem. hr.
JAZZ DANCE I
A beginning jazz dance course aligned with the Theatre, Dance, and Musical Theatre disciplines. Students will be introduced to genres of the jazz dance from primitive ritual through contemporary musical theatre compositions. May be repeated for credit.
DANC 1148 (DANC 1148) 1 sem. hr.
MODERN DANCE I
A beginning modern dance course aligned with the Theatre, Dance, and Musical Theatre disciplines. Students will be introduced to the fundamentals of Modern Dance using a variety of modern dance styles, including technique, progressive movement and dance performance. May be repeated for credit.
DANC 1304 (DANC 1304) 3 sem. hrs.
DANCE IN PERFORMANCE
Students will be introduced to the fundamentals of choreography using a variety of dance styles and, using those skills, create dance intended for public performance. May be repeated for credit.

EARLY CHILDHOOD (ECED)

ECED 2310. 3 sem. hrs.
SURVEY OF EARLY CHILDHOOD EDUCATION
An overview of early childhood education; its historical beginnings, theoretical basis, and variety of settings. This course will introduce the student to a variety of programs from day care through 4th grade.
ECED 3311. 3 sem. hrs.
DEVELOPMENTALLY APPROPRIATE PRACTICE IN EARLY CHILDHOOD EDUCATION
An intensive study of developmentally appropriate practice in early childhood education. Emphasis will be placed on selecting, defining, developing strategies and techniques, and assessing practices which support developmentally appropriate practices. Prerequisite: ECED 2310 or ECED 3324.
ECED 3324. 3 sem. hrs.
CHILD DEVELOPMENT
Provides the student with an overview of the physical, social, emotional, and psychological development of children from infancy through early childhood.
ECED 4310. 3 sem. hrs.
SOCIALIZATION OF THE YOUNG CHILD
An intensive study of the social development, the agents of socialization, and the socialization process in early childhood. Prerequisite: ECED 2310 or ECED 3324.

ECED 4320. 3 sem. hrs.
THE YOUNG CHILD, FAMILY & COMMUNITY RESOURCES
A study of current family structures, their relationship to the young child, society, & the community. Emphasis will be placed on an inclusive model which addresses the needs of the global community as it relates to the young child. Prerequisite: ECED 2310 or ECED 3324.

ECED 4330. 3 sem. hrs.
HEALTH, NUTRITION & LOCOMOTOR CONCEPTS FOR THE YOUNG CHILD
The relationship between health, nutrition, and locomotor development in the young child is investigated.

ECED 4340. 3 sem. hrs.
COMMUNICATION AND AESTHETICS
A study of language development; early literacy, language arts, and aesthetics. Students will develop an integrated thematic unit plan. Strategies and curriculum materials that are developmentally appropriate for young children will be emphasized to support the Texas Essential Knowledge and Skills (TEKS). Prerequisite: Junior standing and completion of ECED 3311 and ECED 3324.

ECED 4350. 3 sem. hrs.
MATHEMATICS, SCIENCE AND SOCIAL STUDIES IN EARLY CHILDHOOD EDUCATION
Skills and concepts taught in early childhood mathematics, science and social studies programs are identified and discussed. Strategies and curriculum materials that are developmentally appropriate for young children will be emphasized. Prerequisites: Junior standing; completion of EDCI 3311 (or EDCI 5305 for MAC Students), ECED 3324 and completion of (or concurrent enrollment in) SMTE 3315 or SMTE 3316.

ECED 4696. 1-6 sem. hrs.
DIRECTED INDIVIDUAL STUDY
Programs will be designed for individual cases through special permission of the Department Chair and Dean. May be repeated for credit when the topic varies.

ECONOMICS (ECON)________________

ECON 2301 (ECON 2301) 3 sem. hrs.
MACROECONOMICS PRINCIPLES
An overview of how the economy of the United States is organized and functions in a market price system. Market processes are used to show how resources and incomes are allocated by households and businesses. Determination of national income, employment, price level, interest rates, and growth are the focus of simple analysis techniques. Monetary and fiscal policies are examined including their international dimensions. Satisfies the economics component of the University core curriculum.

ECON 2302 (ECON 2302) 3 sem. hrs.
MICROECONOMICS PRINCIPLES
Demand and supply, consumer behavior, elasticity, production costs, competitive and non-competitive market structures and models of the modern market price system are analyzed. Emphasis on use of marginal analysis to determine prices, output, income and economic welfare in a market price system. Prerequisite: MATH 1314 or equivalent. Satisfies the economics component of the University core curriculum.

ECON 3310. 3 sem. hrs.
INTERMEDIATE MACROECONOMICS
Theory of the determination of aggregate income, employment and prices is examined. Focus is on the microeconomic foundations of aggregate demand: consumption, investment, foreign trade, and government. Macroeconomic models from the basic through the complete model are examined for the U.S. and global economies. Prerequisites: ECON 2301, ECON 2302, and Junior standing or above.

ECON 3311. 3 sem. hrs.
INTERMEDIATE MICROECONOMICS
Examines supply and demand analysis, consumption theory, production theory, structure and performance of firms, efficiency of markets, and determination of general welfare in a market price system. Prerequisites: ECON 2301, ECON 2302, and Junior standing or above.

ECON 3312. 3 sem. hrs.
MONEY AND BANKING
Description of the operations of banking and other financial institutions, examination of the basic tenets of monetary theory, analysis of monetary policy and its contribution to economic policy. Prerequisites: ECON 2301, ECON 2302 and Junior standing or above.

ECON 3315. 3 sem. hrs.
INTERNATIONAL ECONOMIC ISSUES
Evaluates and analyzes various contemporary issues in international economics, using elementary economic theory and recent economic and financial data. The course includes issues such as economic integration, regionalization and globalization, international trade issues, the structure and role of international economic organizations, the foreign exchange market, and economic issues in developing countries. Prerequisites: ECON 2301 and Junior standing or above.

ECON 3316. 3 sem. hrs.
ENVIRONMENTAL ECONOMICS
Uses economic analysis to examine the underlying causes of environmental and natural resource problems, as well as alternative policy issues. The choice of environmental protection goals and the means of achieving them are analyzed and applied to the cases of air pollution (local and global), water pollution, and toxic pollution. The environmental policies of various countries are compared and studied from an economic perspective. Prerequisites: ECON 2301 and Junior standing or above.

ECON 3320. 3 sem. hrs.
PUBLIC FINANCE
This course examines the role that government plays in the economy. The course discusses the conditions for economic efficiency to be achieved and circumstances where a market fails. It also presents the concepts of public goods and the aggregation of individual preferences into collective priorities as expressed by the general public through the political process. Topics include taxation, welfare economics, and budget and fiscal federalism. Pre-requisites: ECON 2301, ECON 2302 and junior standing or above.
ECON 3322. MANAGERIAL ECONOMICS 3 sem. hrs.
Emphasis is on the use of economic principles to make sound business decisions. Students will use economic analysis, knowledge of markets and organizations to address real-world problems. The course emphasizes the role of the business economist as a member of the management team trying to find ways to improve the use of resources available to an organization. Prerequisites: ECON 2301, ECON 2302, and Junior standing or above.

ECON 3325. ECONOMICS OF EUROPEAN INTEGRATION 3 sem. hrs.
An introduction to the economics of Western Europe, and by implication, the economic functions of the institutions of the European Union (EU). Students are introduced to economic policy issues which are currently of concern in the European Union, and the analysis of economic problems which are of particular relevance to European Union member states. These include (but are not limited to) the theory of customs unions, optimal currency area theory, the single market, competition policy, and the external trade and development policies of the EU. Prerequisites: ECON 2301, ECON 2302, and Junior standing or above.

ECON 4310. INTRODUCTION TO ECONOMETRICS 3 sem. hrs.
A study of the analysis of quantitative data, with special emphasis on the application of statistical methods to economic problems. The course covers the theory and practice of ordinary least squares regression, application to economics and finance, and selected special topics. Students are expected to use statistical software packages as part of this course. Pre-requisites: ECON 2301, ECON 2302, ORMS 3310 (or MATH 1342 or equivalent) and junior standing or above.

ECON 4388. HISTORY OF ECONOMIC THOUGHT 3 sem. hrs.
A consideration of the philosophical basis, historical context, and development of economic thinking. Focuses on pre-20th-century economists-the Mercantilists, the Physiocrats, Adam Smith, David Ricardo, Karl Marx, and early neoclassical economists. Attention is also given to later economists and schools of thought as continuations and modifications of earlier ideas in economics. Pre-requisites: ECON 3310, ECON 3311 and junior standing or above.

ECON 4390. CURRENT TOPICS IN ECONOMICS 1-3 sem. hrs.
Selected topics for special study related to economics, the functioning of the economy or economic issues. May be repeated for credit when topics vary. Prerequisites: ECON 2301 or equivalent, and others depending on topic, and Junior standing or above. Contact the Dean’s office for information.

ECON 4396. DIRECTED INDIVIDUAL STUDY 1-3 sem. hrs.
Individual supervised study and a final report. Prerequisites: permission of instructor, Junior standing or above, and others depending on selected topic. Inquire at the Dean’s office for information.

ECON 4398. INTERNSHIP IN ECONOMICS 3 sem. hrs.
Supervised full-time or part-time, off-campus training in a service, manufacturing, or public sector position. Oral and written reports required. Prerequisites: Completion of at least 12 semester credit hours toward a Minor in Economics, and Junior standing or above. Students must apply to program and be accepted prior to registration. May not be repeated for credit.

EDUCATION/STUDENT TEACHING (EDUC)
EDUC 4993. 9 sem. hrs.
STUDENT TEACHING: GRADES 8-12
Laboratory experiences and directed teaching in grades 8-12. Prerequisite: Admission to Student Teaching.

EDUC 4694. 6 sem. hrs.
STUDENT TEACHING: EC-GRADE 6
Laboratory experiences and directed teaching in grades EC-Grade 6. Prerequisite: Admission to Student Teaching. Must be taken with EDUC 4393 Student Teaching: Grades 8-12.

EDUC 4696. 1 6 sem. hrs.
DIRECTED INDIVIDUAL STUDY
Programs will be designed for individual cases through special permission of the Department Chair and Dean. May be repeated for credit when the topic varies.

EDUC 4699. 6 sem. hrs.
TEACHING INTERNSHIP
An internship designed for inservice teachers seeking certification under the post baccalaureate program. Grade assigned will be "credit" (CR) or "no credit" (NC). Prerequisite: Admission to Student Teaching.

EDUC 4994. 9 sem. hrs.
STUDENT TEACHING: EC-GRADE 6
Laboratory experiences and directed teaching in an EC-Grade 6 classroom. Prerequisite: Admission to Student Teaching.

EDUCATIONAL CURRICULUM AND INSTRUCTION (EDCI)

EDCI 2307. 3 sem. hrs.
SCHOOLING IN A DEMOCRACY
A course to enable citizens, parents, and prospective professional educators to synthesize their general education experiences/courses with current issues and practices related to teaching and learning in the United States. Career opportunities and personal commitments to the teaching profession will be explored. The systematic process of admission to the teacher education program will be initiated. Field observations in communities and schools will be required.

EDCI 3311. 3 sem. hrs.
SCHOOL AND SOCIETY
The characteristics, organization, and management of the American School System including: The history of the development of American schools, legal and ethical issues, teaching as a profession, influence of cultural background on instruction of students, characteristics and needs of special populations, and adapting curriculum and instruction for students from special populations. Field experience required.

EDCI 4311. 3 sem. hrs.
CLASSROOM MANAGEMENT: GRADES EC-4
A study of classroom organization and management as related to basic principles of human development and learning. Preventative discipline techniques utilizing both group and individual processes are emphasized. This course is to be taken concurrently with student teaching.

EDCI 4312. 3 sem. hrs.
CLASSROOM MANAGEMENT: GRADES 8-12
A study of classroom organization and management as related to basic principles of human development and learning. Preventative discipline techniques utilizing both group and individual processes are emphasized. This course is to be taken concurrently with student teaching.

EDCI 4313. 3 sem. hrs.
CLASSROOM MANAGEMENT: GRADES 4-8
A study of classroom organization and management as related to basic principles of human development and learning. Preventative discipline techniques utilizing both group and individual processes are emphasized. This course is to be taken concurrently with student teaching.

EDCI 4314. 3 sem. hrs.
CLASSROOM MANAGEMENT: GRADES EC-6
A study of classroom organization and management as related to basic principles of human development and learning. Preventative discipline techniques utilizing both group and individual processes are emphasized. This course is to be taken concurrently with student teaching.

EDCI 4321. 3 sem. hrs.
INSTRUCTIONAL DESIGN FOR SPECIAL POPULATIONS: GRADES EC-4
A study of the characteristics and needs of special student populations in a culturally diverse society. Special populations emphasized will include special education, gifted and talented, at-risk, and bilingual. Instructional strategies, differentiating curriculum, and diversifying assessment will be examined in relation to special populations.

EDCI 4322. 3 sem. hrs.
INSTRUCTIONAL DESIGN FOR SPECIAL POPULATIONS: GRADES 8-12
A study of the characteristics and needs of special student populations in a culturally diverse society. Special populations emphasized will include special education, gifted and talented, at-risk, and bilingual. Instructional strategies, differentiating curriculum, and diversifying assessment will be examined in relation to special populations.

EDCI 4323. 3 sem. hrs.
INSTRUCTIONAL DESIGN FOR SPECIAL POPULATIONS: GRADES 4-8
A study of the characteristics and needs of special student populations in a culturally diverse society. Special populations emphasized will include special education, gifted and talented, at-risk, and bilingual. Instructional strategies, differentiating curriculum, and diversifying assessment will be examined in relation to special populations.

EDCI 4324. 3 sem. hrs.
INSTRUCTIONAL DESIGN FOR SPECIAL POPULATIONS: GRADES EC-6
A study of the characteristics and needs of special student populations in a culturally diverse society. Special populations emphasized will include special education, gifted and talented, at-risk, and bilingual. Instructional strategies, differentiating curriculum, and diversifying assessment will be examined in relation to special populations.

EDCI 4390 1-6 sem. hrs.
SPECIAL TOPICS
Topics in Curriculum and Pedagogy will be explored at the request of participants or faculty with the approval of the
necessary for the integrated teaching of math, science, teacher with the pedagogical knowledge and skills for the integrated teaching of math, science, social studies, language arts, kinesiology, art, and music. The use of technology in teaching these subject areas will be addressed throughout the course. Observation and collaboration with professional elementary teachers in the field, as well as journal writing, will be integral parts of the course. Two full days per week are required at a partner school site. Prerequisites: Admission to teacher education. Successful completion of SMTE 1350 and READ 3320. Successful completion of SMTE 3315 or SMTE 3316. Successful completion of thirty-nine (39) hours of general education requirements.

EDCI 4606.  6 sem. hrs.
PLANNING, TEACHING, ASSESSMENT AND TECHNOLOGY FOR GRADES 8-12 TEACHERS
This course is designed to provide the prospective EC-4 teacher with the pedagogical knowledge and skills necessary for the integrated teaching of math, science, social studies, language arts, kinesiology, art, and music. The use of technology in teaching these subject areas will be addressed throughout the course. Observation and collaboration with professional elementary teachers in the field, as well as journal writing, will be integral parts of the course. Two full days per week are required at a partner school site. Prerequisites: Admission to teacher education. Successful completion of SMTE 1350 and READ 3320. Successful completion of SMTE 3315 or SMTE 3316. Successful completion of thirty-nine (39) hours of general education requirements.

EDCI 4607.  6 sem. hrs.
PLANNING, TEACHING, ASSESSMENT AND TECHNOLOGY FOR GRADES 4-8 TEACHERS
This course is designed to provide the prospective EC-4 teacher with the pedagogical knowledge and skills necessary for the integrated teaching of math, science, social studies, language arts, kinesiology, art, and music. The use of technology in teaching these subject areas will be addressed throughout the course. Observation and collaboration with professional elementary teachers in the field, as well as journal writing, will be integral parts of the course. Two full days per week are required at a partner school site. Prerequisites: Admission to teacher education. Successful completion of SMTE 1350 and READ 3320. Successful completion of SMTE 3315 or SMTE 3316. Successful completion of thirty-nine (39) hours of general education requirements.

EDCI 4608.  6 sem. hrs.
PLANNING, TEACHING, ASSESSMENT AND TECHNOLOGY FOR GRADES EC-6 TEACHERS
This course is designed to provide the prospective EC-4 teacher with the pedagogical knowledge and skills necessary for the integrated teaching of math, science, social studies, language arts, kinesiology, art, and music. The use of technology in teaching these subject areas will be addressed throughout the course. Observation and collaboration with professional elementary teachers in the field, as well as journal writing, will be integral parts of the course. Two full days per week are required at a partner school site. Prerequisites: Admission to teacher education. Successful completion of SMTE 1350 and READ 3320. Successful completion of SMTE 3315 or SMTE 3316. Successful completion of thirty-nine (39) hours of general education requirements.

EDCI 4696.  1-6 sem. hrs.
DIRECTED INDIVIDUAL STUDY
Programs will be designed for individual cases through special permission of the Department Chair and Dean. May be repeated for credit when the topic varies.

EDUCATIONAL TECHNOLOGY (ETEC)

ETEC 3100.  1 sem. hr.
EDUCATIONAL TECHNOLOGY FOR PRESERVICE TEACHERS IN SCHOOLS
This field-based integrated course is designed to provide educators with an overview of basic resource tools and instructional methods to be considered when designing and developing educational technology integrated curriculum plans. This field-based infused seminar will look at basic integrated applications in creating electronic portfolios for all students. Aspects of online collaborative tools and their pedagogical implications in EC-12 environments will also be incorporated.

ETEC 3310.  3 sem. hrs.
TECHNOLOGY APPLICATIONS FOR TEACHERS
This course enables preservice and inservice teachers to effectively use computer-based technology for instructional and professional purposes, and provides participants with the skills and knowledge required for teacher certification in Texas. This course meets the university computer literacy requirement.

ENGINEERING (ENGR)

The numbers of weekly lecture and laboratory hours associated with each course are designated by (lecture:lab) following the semester hours (1 lab hour = 3 contact hours). Additional laboratory work may be required to complete the assignments. All courses involving labs will require appropriate fees.

ENGR 1210  2 sem hrs (1:2).
INTRODUCTION TO ENGINEERING
An introduction to the practice of engineering design, the creative process, reverse engineering, use of hand tools, and the diverse career paths within engineering. This course is intended for engineering students and other students interested in understanding the fundamentals of engineering and considering engineering as a possible profession.

ENGR 1211 (ENGR 1201)  2 sem. hrs. (1:2)
FOUNDATIONS OF ENGINEERING I
Introduction to the engineering profession, ethics, and disciplines; development of skills in teamwork, problem solving and design; other topics include computer applications and programming; visualization, orthographic draw-
ings and CAD tools; introduction to electrical circuits, semiconductor devices, digital logic, communications and their application in systems; Newton’s laws, unit conversions, statistics, Excel; basic graphics skills. Co-requisite: MATH 2413.

ENGR 1212 (ENGR 1204) 2 sem. hrs. (1:2) FOUNDATIONS OF ENGINEERING II
Continuation of ENGR 1211. Topics include, depending on the major: emphasis on computer applications and programming and solids modeling using CAD tools or other software; fundamentals of engineering science; advanced graphic skills. Prerequisites: ENGR 1211 and MATH 2413.

ENGR 1215 2 sem. hrs. (1:2) CO-OP
Job search and work skills; understanding engineering and industrial environments, communications, teamwork, and leadership skills; research and development, and patents review skills. Co-requisites: ENGR 1212.

ENGR 2316 3 sem. hrs. (3:0) THERMODYNAMICS
Theory and application of energy methods in engineering; conservation of mass and energy; energy transfer by heat, work and mass; thermodynamic properties; analysis of open and closed systems; the second law of thermodynamics and entropy; gas, vapor and refrigeration cycles. Prerequisites: PHYS 2425, MATH 2414.

ENGR 2320 (ENGR 2332) 3 sem. hrs. (2:3) STRENGTH OF MATERIALS
Concepts in strength of materials, stress, strain; deformation under load, direct, shear, and combined stresses; stress concentration, bending stresses and torsional shear stresses, deflection in beams and shafts; columns, and pressure vessels. Prerequisite: ENGR 2321.

ENGR 2321 (ENGR 2303) 3 sem. hrs. (2:3) STATICS AND DYNAMICS
Application of the fundamental principles of Newtonian mechanics to the statics and dynamics of particles; equilibrium of trusses, frames, beams and other rigid bodies. Prerequisites: MATH 2413 and PHYS 2425.

ENGR 2322 3 sem. hrs. (2:3) MATERIALS SCIENCE
Mechanical, optical, thermal, magnetic and electrical properties of solids; differences in properties of metals, polymers, ceramics and composite materials in terms of bonding and crystal structure. Prerequisites: CHEM 1311, PHYS 2425.

ENGR 2350 3 sem. hrs. (2:3) MANUFACTURING PROCESSES
Introduction to metal and non-metallic manufacturing processes; casting, forging, rolling, extrusion, sheet metal forming, cutting tools turning and milling operations, abrasive machining, welding and joining, powder compaction, molding, forming of plastics, surface treatment, human factors and safety. Prerequisite: MATH 2312.

ENGR 2360 (ENGR 2305) 3 sem. hrs. (2:3) CIRCUIT ANALYSIS
This course covers principles of electronics: charge, voltage, resistance, current, and power; Ohm’s Law; Kirchhoff’s voltage and current laws; RC and LC circuits; periodic functions, average and RMS measurements; transformers, electrical measurement instruments. The laboratory provides hands-on experience with devices and circuits discussed in the classroom. Prerequisite: PHYS 2425.

ENGR 3315 3 sem. hrs. (3:0) FLUID MECHANICS
Fluid properties, fluid statics, dynamics, and kinematics, conservation of energy and momentum incompressible, laminar and turbulent flow. Similitude and dimensional analysis, and viscous flow. Prerequisites: PHYS 2425, MATH 3315.

ENGINEERING TECHNOLOGY (ENTC)

ENTC 1303. 3 sem. hrs. (2:3) INTRODUCTION TO ENGINEERING TECHNOLOGY
Engineering technology careers; professional and ethical responsibilities; technical laboratories and skills; solving engineering problems; use of software programs and packages; health and safety issues; environmental issues; overviews of industrial equipment; plant tours. Prerequisite: None. Fall.

ENTC 1304 (ENTC 1304) 3 sem. hrs. (2:3) ENGINEERING DESIGN GRAPHICS
Introduction engineering graphics, drafting and computer aided design (CAD), orthographic representations and solid models of engineering designs, sectioning, dimensioning, tolerancing, assembly drawings, isometric pictorial drawings and working drawings according to ANSI Y14.5M. Prerequisite: None. Fall, Spring.

ENTC 2402. 4 sem. hrs. (3:3) MANUFACTURING PROCESS
Introduction to metal and non-metallic manufacturing processes; casting, forging, rolling, extrusion, sheet metal forming, cutting tools turning and milling operations, abrasive machining, welding and joining, powder compaction, molding, forming of plastics, surface treatment, human factors and safety. Prerequisite: MATH 2312. Spring.

ENTC 2403. 4 sem. hrs. (3:2) STATICS AND DYNAMICS
Covers force vectors, equilibrium, force systems, structural analysis, friction, centroids and centers of gravity, moments of inertia, kinematics of particles and rigid bodies, impulse and momentum. Prerequisites: PHYS 2425 or PHYS 1401, ENTC 1303, MATH 2413. Spring.

ENTC 2414 (ENGT 1401) 4 sem. hrs. (3:3) CIRCUIT ANALYSIS I
Fundamental aspects of DC circuit analysis; charge, voltage, resistance, current, and power; Ohm’s Law; methods of analysis; series and parallel circuits; Kirchhoff’s voltage and current laws; Thévenin and Norton Theorems; electrical measurement instruments; use of analysis software. Prerequisite: MATH 2312. Spring.

ENTC 2418 (ENGT 1409) 4 sem. hrs. (3:3) INTRODUCTION TO ELECTRONICS
This course covers principles of electronics: charge, voltage, resistance, current, and power; Ohm’s Law; Kirchhoff’s voltage and current laws; RC and LC circuits; periodic functions, average and RMS measurements; transformers, electrical measurement instruments. The laboratory provides hands-on experience with devices and circuits discussed in the classroom. Prerequisite: PHYS 1401 or PHYS 2425. Fall.
ENTC 2450. 4 sem. hrs. (4:0)
INTRODUCTION TO THERMAL SCIENCE
Thermodynamics, heat transfer and fluid flow principles and their applications to electrical systems and digital devices. Topic includes: heat generation in printed-circuit boards and power transmission mediums, thermal resistance concept, junction temperature, cooling and heating loads, air and liquid cooled heat sinks, thermoelectric power generation and refrigeration, dielectric heating, heat pipes and vortex tubes

ENTC 3323. 3 sem. hrs. (2:3)
ROBOTICS AND AUTOMATION
Automation in a manufacturing and assembly setting, material handling systems, remote guided vehicles, automated storage and retrieval systems, computer numerical machine tools, robotics. Prerequisite: ENTC 3415 or ENTC 2418. Spring.

ENTC 3340. 3 sem. hrs. (2:3)
POWER PROTECTION SYSTEMS
Course topics include safety, reliability and availability in power systems; breaker operation; relay operation and relay circuit design; fault tolerance; cost analysis; control systems and system surveillance. Prerequisites: ENTC 3415.

ENTC 3406. 4 sem. hrs. (3:3)
FLUID MECHANICS AND FLUID POWER
Fluid properties, fluids statics, submerged and floating bodies, general energy equation, flow of fluids in pipes, forces exerted by fluids in motion, fluid power, hydraulic and pneumatic systems, flow past bodies, flow in open channels, compressible flow. Prerequisite: ENTC 2403. Fall.

ENTC 3408. 4 sem. hrs. (3:3)
STRENGTH OF MATERIALS
Concepts in strengths of materials, stress, strain; torsion; deformation under load; direct, shear, and combined stresses; shear and moment diagrams; mohr’s circle; stress concentrations, bending stresses and torsional shear stresses, deflection in beams and shafts; columns, connections, and pressure vessels. Prerequisites: ENTC 2403.

ENTC 3410. 4 sem. hrs. (3:3)
MATERIAL SCIENCE
Structure and properties of metallic and nonmetallic materials; microstructure, mechanical testing, phase diagrams, heat treatment, testing, ceramics, polymers, composites, construction materials, failure analysis, nondestructive evaluation, corrosion and thermal properties of materials. Prerequisite: CHEM 1311. Spring.

ENTC 3415. 4 sem. hrs. (3:3)
CIRCUIT ANALYSIS II
AC circuit analysis principles: AC generation, periodic functions, complex numbers, phasors, impedance and admittance, network theorems, power, frequency response, filters, transformers, and balanced three-phase systems; and use of analysis software. Prerequisites: ENTC 2414, ENTC 1203, and MATH 2413. Fall.

ENTC 3416. 4 sem. hrs. (3:3)
DIGITAL FUNDAMENTALS
Introduces the principles of digital logic analysis and design: logic functions; logic gates, number systems and conversions; Boolean algebra; logic simplification, combinational circuits, programmable logic devices, sequential circuits, and use of analysis and simulation software. Prerequisite: ENTC 2414 or ENTC 2418. Spring.

ENTC 3418. 4 sem. hrs. (3:3)
MICROPROCESSORS/MICROCONTROLLERS
Introduction to microprocessor architecture, assembly language programming, and interfacing. Topics include computer organization, addressing modes, instruction set, interrupts, timing, memory, and interfacing. Prerequisites: COSC 1435. Fall.

ENTC 3420. 4 sem. hrs. (3:3)
THERMODYNAMICS
Thermodynamic properties of liquids and vapors in non-flow and steady-flow process, ideal gas law, applied to refrigeration, power plants, turbines compressors, and internal combustion engines. Prerequisites: PHYS 2425 or PHYS 1401, MATH 2413. Fall.

ENTC 3444. 4 sem. hrs. (3:3)
ELECTRONIC DEVICES AND CIRCUITS I
An introduction to semiconductor theory; solid state devices, including diodes, Bipolar Junction transistors, JFETs, and MOSFETs; principles of operational amplifiers; transducers and sensors. Prerequisites: ENTC 3415 or ENTC 2418. Spring.

ENTC 3445. 4 sem. hrs. (3:3)
ELECTRONIC DEVICES AND CIRCUITS II
The applications of electronic devices, including linear and non-linear Op-Amp circuits, oscillators, wave-shaping circuits, active filters, rectifiers, voltage regulators, and power supplies; industrial electronics. Prerequisite: ENTC 3444 and PHYS 2425. Fall.

ENTC 3450. 4 sem. hrs. (3:3)
ELECTRONIC SYSTEM DESIGN
Principles of engineering design of electronic circuits and systems; time and frequency responses; network analysis; systems specifications; evaluation, testing, and verification; use of electronic design automation tools. Prerequisites: ENTC 3445. Spring.

ENTC 3455. 4 sem. hrs. (3:3)
SOLID MODELING APPLICATIONS
Introduction to differential equations. Use of computer aided design and solid modeling tools in engineering design and manufacturing including: solid modeling, stress, flow and heat transfer analysis using finite element methods, and rapid prototyping. Prerequisite: ENTC 3408. Spring.

ENTC 4320. 3 sem. hrs. (3:0)
HEAT TRANSFER
Fundamental study of convection, conduction and radiation as applied to heat transport, heat exchangers, boilers, other heat transfer equipment. Prerequisite: ENTC 3406. Spring.

ENTC 4322. 3 sem. hrs. (2:3)
PROGRAMMABLE LOGIC CONTROLLERS
Introduction to PLCs and their use in industrial automation. Topics include programming, counters, timers, interrupts, and process control applications. Prerequisites: ENTC 3416. Fall.

ENTC 4335. 3 sem. hrs. (2:3)
ENERGY CONVERSION
Installation, design characteristics, operational performance, and maintenance of motors, turbines, pumps and compressors. Introduction to global energy concerns; fos-
sil and nuclear fuels; energy consumption analysis; energy management and conservation techniques; renewable and alternative energy sources. Modern energy conversion devices such as fuel cells, photovoltaic cells, and micro-power turbines. Prerequisite: ENTC 3420. Spring.

ENTC 4336. 3 sem. hrs. (3:0)
RELIABILITY AND MAINTENANCE OF INDUSTRIAL EQUIPMENT
Process industrial equipment, equipment reliability, basic stress analysis of pressure vessel elements, welding technology in repair and fabrication, fitness for service, failure mechanisms, major inspection and vessel codes, material selection, preventive, and predictive maintenance, fault tree and root cause analysis, CMMS, implementing TPM and technical and management issues. Prerequisite: ENTC 3408. Spring.

ENTC 4350. 3 sem. hrs. (1:5)
CAPSTONE PROJECTS
This course allows students to employ the knowledge attained in other courses to implement (including building, testing, and documenting) the approved project in ENTC 4315, within budget and on schedule. Course requirements include a written report and oral presentations. To be taken the student’s final semester before graduation. Prerequisite: ENTC 4415. Spring.

ENTC 4360. 3 sem. hrs. (3:0)
MECHANICAL SYSTEM DESIGN
Analysis, management and cost, team work, optimal design, and computer simulation of mechanical systems and components; Applications in fluid flow and heat transfer, machine elements, and stress analysis. Selected course topics are included as computer programming projects. Prerequisite: ENTC 4432. Fall.

ENTC 4415. 4 sem. hrs. (3:2)
PROJECT JUSTIFICATION AND MANAGEMENT
Foundations of engineering economy, cash flow and equivalence, and project justification. Introduction to project management, planning, scheduling, and control, use of project management software, GANTT charts, PERT charts, critical path. Students prepare proposals, including specifications, timelines, schedule, and budget, for projects to be implemented in ENTC 4350. This course should be taken the semester preceding ENTC 4350. Prerequisite: Senior standing. Fall.

ENTC 4420. 4 sem. hrs. (3:3)
EMBEDDED SYSTEMS
Characteristics of embedded systems, system design, interface devices, memory management, interrupt support, input/output applications, software/hardware co-design, modular programming, multitasking, simulation, and control of external devices. Prerequisites: ENTC 3416 and ENTC 3418. Fall.

ENTC 4430. 4 sem. hrs. (3:3)
POWER TRANSMISSION & DISTRIBUTION
This course covers principles of power transmission and distribution. Topics include unbalanced distribution; point to point measurements, operation control of systems; power systems; transmission lines; fault analysis; line modeling and unit analysis. Prerequisites: ENTC 3415.

ENTC 4432. 4 sem. hrs. (3:3)
DESIGN OF MACHINE ELEMENTS
Nature of mechanical design, stress deformation analysis, design of different types of machine elements such as flexible mechanical elements, gears, fasteners and welded joints, springs bearings, shafts, brakes, clutches, and couplings using conventional and computer aided design tools. Prerequisite ENTC 3408. Fall

ENTC 4446. 4 sem. hrs. (3:3)
CONTROL SYSTEMS I
Introduction to control systems; open and feedback; Laplace transform and frequency response; control valves; electric motors; P, PI, and PID modes of control; analog and digital controllers Process characteristics; analysis of control systems; gain and phase margin; stability. Prerequisites: ENTC 3444. Spring.

ENTC 4448. 4 sem. hrs. (3:3)
CONTROL SYSTEMS II
Continuation of Control Systems I; Control systems design; controller mode selection; control loop tuning; data acquisition systems; distributed control systems; supervisory control; data transmission; networks; analysis and specification of complete control systems. Prerequisite: ENTC 4446. Fall.

ENTC 4465. 4 sem. hrs. (4:0)
INDUSTRIAL SAFETY AND ACCIDENT PREVENTION
An introduction to OSHA and standards development for occupational health in general industry. Special attention to chemicals, flammable liquids and fire protection; industrial accident prevention; safe plant layout, safety in maintenance; boilers and pressure vessels; design of machine guards; toxic material handling and storage; industrial health engineering; power tools; biological, radiation, chemical, welding and electrical hazards; Nature of risk and human error; system and software hazard analysis.

ENTC 4490. 1-4 sem. hrs.
SELECTED TOPICS
Subject material variable. May be repeated for credit when topics are different. Prerequisites: Vary depending upon topic. Offered on demand.

ENTC 4496. 1-4 sem. hrs.
DIRECTED INDEPENDENT STUDY
Requires a formal proposal of study to be completed in advance of registration, approval of supervising faculty and chairperson. Prerequisites: Vary depending upon area of study. Offered on demand.

ENTC 4697. 1-6 sem. hrs.
CO-OP/INTERNSHIP
Supervised off campus training in the industrial workplace. Oral and written report required. Prerequisite: Approval of Engineering Technology and Cooperative Education Coordinators prior to enrollment in the course. Offered on demand.

ENGLISH (ENGL)

ENGL 0399. 3 sem. hrs.
FUNDAMENTALS OF WRITING
A portfolio-based course focused on the writing process, including conferencing, pre-writing, revision, and editing techniques. Students will enter English 0399 through TASP-mandated remediation. (Not counted toward graduation.)

ENGL 1301 (ENGL 1301) 3 sem. hrs.
COMPOSITION I
Principles, techniques, and processes of written composition, textual analysis, and critical thinking. Satisfies the university core curriculum requirement in composition.
ENGL 1302 (ENGL 1302)  3 sem. hrs.
COMPOSITION II
Principles, techniques, and processes of written composition, with an emphasis on research and argument. Satisfies the university core curriculum requirement in composition. Prerequisite: ENGL 1301.
ENGL 2332 (ENGL 2332)  3 sem. hrs.
LITERATURE OF THE WESTERN WORLD: FROM THE CLASSICS TO THE RENAISSANCE
Study of important literary texts from the Ancient World to the Renaissance. May be used to satisfy the university core curriculum requirement in literature. Prerequisites: ENGL 1301 and 1302.
ENGL 2333 (ENGL 2333)  3 sem. hrs.
LITERATURE OF THE WESTERN WORLD: FROM THE ENLIGHTENMENT TO THE PRESENT
Study of important literary texts from the Enlightenment to the present. May be used to satisfy the university core curriculum requirement in literature. Prerequisites: ENGL 1301 and 1302.
ENGL 2334.  3 sem. hrs.
THEMES AND GENRES IN ENGLISH LITERATURES
Study of literatures written by British authors and/or authors from former British colonies. May be used to satisfy the core requirement in literature. Prerequisites: ENGL 1301 and 1302.
ENGL 2335.  3 sem hrs.
THEMES AND GENRES IN THE LITERATURES OF THE AMERICAS
Study of literatures written by authors of the Americas. May be used to satisfy the core requirement in literature. Prerequisites: ENGL 1301 and 1302.
ENGL 2370.  3 sem. hrs.
INTRODUCTION TO ENGLISH STUDIES
An introduction to literary analysis and scholarship for the intermediate writer. Emphasis placed on genres of literature, literary research, and expository and analytical composition. Should be taken by sophomore-level English majors. Prerequisites: ENGL 1301 and 1302.
ENGL 3301.  3 sem. hrs.
PRINCIPLES OF PROFESSIONAL & REPORT WRITING
A course designed to help students gain practical experience in finding and interpreting information and writing reports and documents for specialized audiences in the professional world. ENGL 3301 will be held in a computer-assisted classroom. Satisfies university computer literacy requirement. Typing ability is a prerequisite for this course. Prerequisites: ENGL 1301 and 1302.
ENGL 3320.  3 sem. hrs.
THE BIBLE AS LITERATURE
A consideration of the Bible and its development over time as an anthology of texts, including its influence on the literature of the Anglo-American tradition. For all majors. Prerequisites: ENGL 1302 and ENGL 2332, 2333, 2334, or 2335.
ENGL 3321.  3 sem. hrs.
FILM AND LITERATURE
Studies the connections between the formal elements of literature and of film, with emphasis on theme, narrative style, and genre. By viewing films based on literary sources, students will analyze how literature is adapted into film as well as identify strategies to view and read critically. For all majors. Prerequisites: ENGL 1302 and ENGL 2332, 2333, 2334, or 2335.
ENGL 3322.  3 sem. hrs.
LITERARY PERSPECTIVES ON CHILDREN’S FICTION AND POETRY
Literary study of children’s literature through reading, analysis, discussion and interpretation. The course emphasizes issues connected with society, culture, history, and literary genre.
ENGL 3323.  3 sem hrs.
LITERARY PERSPECTIVES ON YOUNG ADULT FICTION AND POETRY
Literary study of young adult literature through analysis, discussion, and interpretation. The course emphasizes literary issues connected with society, culture, history, and genre.
ENGL 3339.  3 sem. hrs.
INTRODUCTION TO LINGUISTICS
Introductory survey course covering phonetics, morphology, syntax, semantics, sociolinguistics, neurolinguistics, and language acquisition. Offered in Spring.
ENGL 3340.  3 sem. hrs.
GRAMMAR
Presents a general descriptive overview of English grammar and provides a structural framework for analyzing English sentences.
ENGL 3341.  3 sem. hrs.
LITERATURE OF THE ENGLISH RENAISSANCE
A study of significant works of poetry, prose, and non-Shakespearean drama from 1500 to 1660.
ENGL 3342.  3 sem. hrs.
BRITISH LITERATURE BEFORE THE RENAISSANCE
A study of significant works of British literature (poetry, prose, and drama) produced before the Renaissance, primarily from the Anglo-Saxon up to the Early Modern period.
ENGL 3345.  3 sem. hrs.
BRITISH LITERATURE OF THE 19TH THOUGH 21ST CENTURIES
A study of selected poetry, drama, and prose of the 19th through 21st Centuries centuries from a cultural perspective.
ENGL 3348.  3 sem. hrs.
DRAMA
A genre-oriented study of dramatic literature, using a wide range of texts. Variable content.
ENGL 3349.  3 sem. hrs.
THEMES AND FORMS OF POETRY
A genre-oriented study of poetry using a wide range of texts. Variable content.
ENGL 3353.  3 sem. hrs.
THE SHORT STORY
A study of the short story (mainly American) from its early beginnings in the mid-nineteenth century to present times.
ENGL 3354.  3 sem. hrs.
AMERICAN LITERATURE: TO 1865
A study of significant works of American poetry, drama, and prose from the country’s pre-European beginnings to 1865, including both oral and written traditions.
ENGL 3355. 3 sem. hrs.
AMERICAN LITERATURE: LATE 19TH AND EARLY 20TH CENTURY
This course examines American poetry, drama, and prose from 1865 to 1945 with a focus on how these works reflect literary and cultural values.

ENGL 3356. 3 sem. hrs.
AMERICAN LITERATURE: SINCE 1945
This course examines American poetry, drama, and prose from 1945 to the present, with emphasis on the diversity of contemporary and postmodern American literature.

ENGL 3357. 3 sem. hrs.
READING AND WRITING AUTOBIOGRAPHY
A study of autobiographies (mainly American) that focuses on the history and theory of the genre. The course also provides opportunities for students to write creatively in the genre.

ENGL 3360. 3 sem. hrs.
CURRENT APPROACHES TO COMPOSITION & LITERATURE
Significant contemporary approaches to written discourse in English, including the study of composition and literature. Prerequisite: One reading course.

ENGL 3361. 3 sem. hrs.
STRATEGIES AND GENRES OF ADVANCED WRITING
Practice in techniques and tactics of the sophisticated writer. Focus on rhetorical strategies that succeed in specific discourse situations, both academic and non-academic. Satisfies university computer literacy requirement.

ENGL 3362. 3 sem. hrs.
TECHNIQUES OF CREATIVE WRITING
Develops students’ theoretical knowledge and practical experience in using the techniques of creative writing. Focuses on poetry and short fiction. For all majors. Prerequisites: ENGL 1302 and ENGL 2332, 2333, 2334, or 2335.

ENGL 3366. 3 sem. hrs.
LANGUAGE IN SOCIETY
An introduction to the study of language as a function of several societal variables. Introduces basic concepts of language such as linguistic varieties, dialect, speech communities and linguistic attitudes.

ENGL 3368. 3 sem. hrs.
COMMUNITY LITERACY AND SERVICE LEARNING
The course explores how literacy is used in specific contexts, particularly in service-learning practices. It also focuses on how literacy is used as a way to construct knowledge, reflection, and action.

ENGL 3369. 3 sem. hrs.
TOPICS IN LINGUISTICS
Exploration of topics such as second language acquisition, language assessment, history of English, and contrastive analysis. May be repeated when topics vary.

ENGL 3375. 3 sem. hrs.
WRITING IN THE PROFESSIONS
Focuses on rhetorical theory in professional writing, such as the role of the audience and purpose, ethical decision making in professional writing, and the broad spectrum of types of professional writing. Students must make a C or better in ENGL 1301 or 1302 and must be able to type before enrolling in ENGL 3375.

This course is held in a computer-assisted classroom. It cannot substitute for other writing classes required for students in their disciplines. Satisfies university computer literacy requirement.

ENGL 3378. 3 sem. hrs.
DESKTOP PUBLISHING
Focuses on the integration of text and visual rhetoric, such as graphics, for all kinds of professional publications including technical documents, newspapers, public relations pieces, and advertisements. Satisfies university computer literacy requirement.

ENGL 3379. 3 sem. hrs.
WRITING IN COMPUTER-NETWORKED ENVIRONMENTS
Emphasizes practical concepts related to writing and communication on the internet and the World Wide Web. Attention is given to finding and analyzing information; analyzing and designing WWW sites and other digital, hypertextual environments; and analyzing and composing hypertext-hypermedia materials for digital, networked environments. For all majors. Satisfies university computer literacy requirement.

ENGL 3380. 3 sem. hrs.
ADVANCED WRITING IN COMPUTER-NETWORKED ENVIRONMENTS
Attention is given to technical and professional writing for digital media and networked environments. Students will focus on planning, designing, and composing professional publications related to their area of study. Emphasizes theoretical as well as practical concepts related to writing and communication in digital networked environments, including the internet and the World Wide Web. For all majors. Satisfies university computer literacy requirement. Prerequisite: ENGL 3379 or permission of instructor.

ENGL 4304. 3 sem. hrs.
SHAKESPEARE: TEXTS AND CONTEXTS
A study of selected dramatic works by William Shakespeare. Plays are studied in the context of Renaissance culture, dramatic traditions, and stage history. Discussion topics include: textual production in the age of Shakespeare, the history of Shakespeare’s plays in print, and the role of collaboration in performance and interpretation. Offered in Spring.

ENGL 4305. 3 sem. hrs.
MAJOR AUTHORS
This course studies the significant works of a single, major author in the Western tradition. Texts are placed in the context of the writer’s life, of the society, culture, and history of the times, and will be viewed through a variety of critical perspectives.

ENGL 4311. 3 sem. hrs.
LITERATURE OF THE ENGLISH ROMANTIC PERIOD
A study of significant works of poetry and prose from 1790-1832, with attention to the cultural and intellectual background of the period.

ENGL 4312. 3 sem. hrs.
LITERATURE OF THE ENGLISH VICTORIAN PERIOD
A study of significant works of poetry and prose from 1832 to 1901, with attention to the cultural and intellectual background of the period.
ENGL 4313. 3 sem. hrs.
BRITISH LITERATURE OF THE 20TH AND 21ST CENTURIES
A study of significant works of poetry, prose, and drama from 1901 to the present, with attention to the cultural and intellectual background of the period.

ENGL 4320. 3 sem. hrs.
PROFESSIONAL WRITING WORKSHOP
Tailored for individual students' writing and publishing projects in their disciplines such as article writing, instructional manuals, grant writing, and feasibility studies.

ENGL 4321. 3 sem. hrs.
GRANT WRITING
Introduces students to the grant writing process and provides them with experience writing actual grant applications on behalf of local non-profit organizations.

ENGL 4330. 3 sem. hrs.
CREATIVE WRITING WORKSHOP I
Develops students' skills as critics and writers of fiction and poetry in a workshop setting. For all majors. Prerequisite: ENGL 3362 or permission of instructor.

ENGL 4335. 3 sem. hrs.
CREATIVE WRITING WORKSHOP II
A continuation of ENGL 4330. For all majors. Prerequisites ENGL 3362 and ENGL 4330.

ENGL 4340. 3 sem. hrs.
THE NOVEL

ENGL 4345. 3 sem. hrs.
RHETORIC, LITERATURE, AND WRITING
This course examines the history and major theories of rhetoric and explores how rhetorical concepts and approaches function in literature and influence contemporary composition practices.

ENGL 4350. 3 sem. hrs.
STUDIES IN POETICS AND POETRY AND POETRY OF THE 19TH TO 21ST CENTURIES
A study of topics in the poetics of the Anglo-American tradition, focusing on works written by (published) poets about poetry and poetics primarily from the 19th to the 21st centuries.

ENGL 4351. 3 sem. hrs.
SENIOR CAPSTONE: 20TH AND 21ST CENTURY LITERATURE & WRITING
A study of twentieth- and twenty-first-century literature in English for the advanced writer. Emphasis placed on both creative writing and analytical expository writing. Prerequisite: ENGL 2370. This course should be taken during the student's final year of academic study.

ENGL 4354. 3 sem. hrs.
SCIENCE FICTION
A thematic study of representative works in the genre.

ENGL 4360. 3 sem. hrs.
WOMEN'S LITERATURE
This course introduces students to literature by women, mainly in the U.S. It focuses on women authors' relation to literary periods and conventions, as well as on the social context of their artistic productions.

ENGL 4361. 3 sem. hrs.
ETHNIC AMERICAN LITERATURE
Topics focus on the social and cultural contexts of artistic productions by Native American, African American, or Chicana authors.

ENGL 4370. 3 sem. hrs.
ORAL INTERPRETATION OF CHILDREN'S LITERATURE
A study, primarily through the medium of performance, of various types and forms of literature for children. Strongly oriented toward teaching literature in the elementary school classroom. (Credit may not be given for both this course and COMM 4323 or THEA 4323.)

ENGL 4380. 3 sem. hrs.
CRITICAL APPROACHES TO LITERATURE AND CULTURE
A study of selected perspectives and critical approaches to literature and culture, including an examination of some of the theoretical assumptions upon which they are based, as well as their implications for the way we think about literature, human identity, and the power of language. Prerequisite: ENGL 2370.

ENGL 4390. 3 sem. hrs.
TOPICS IN ENGLISH
May be repeated when topics vary.

ENGL 4396. 1-3 sem. hrs.
DIRECTED INDIVIDUAL STUDY
See College description. Offered on application.

ENGL 4397. 3 sem. hrs.
APPLIED EXPERIENCE IN TECHNICAL/PROFESSIONAL WRITING
Practical experience in technical and professional writing. May apply for three hours credit in the minor. Offered by application. See college description of applied experience for courses numbered 4398.

ENGL 4398. 3 sem. hrs.
APPLIED EXPERIENCE
See College description. Offered on application.

ENVIRONMENTAL SCIENCE (ESCI)
Weekly lecture and laboratory hours associated with each course are designated by (lecture:lab) following the semester hours. The indicated laboratory hours are laboratory instructional time. In most cases additional laboratory time will be required to complete assigned work. All courses involving labs will require appropriate fees.

Prerequisites for Environmental Science courses may be waived only by permission of the instructor. Environmental Science is a highly interdisciplinary field; courses applicable to the Environmental Science major or minor and which are offered by other departments appear in the appropriate sections of the catalog.

ESCI 1401 (ENVR 1401) 4 sem. hrs. (3:2)
ENVIRONMENTAL SCIENCE I: INTRO TO ENVIRONMENTAL SCIENCE
Principles of the scientific method and critical thinking provide a foundation for subsequent consideration of environmental issues through a multidisciplinary approach. Laboratory exercises and local field experiences reinforce concepts introduced in the lectures. This course counts toward the natural science component of the University Core Curriculum. Fall.

ESCI 1402 (ENVR 1402) 4 sem. hrs. (3:2)
ENVIRONMENTAL SCIENCE II: SYSTEMS AND APPLICATIONS
Continues material introduced in ESCI 1401; this is not a prerequisite, but familiarity with basic environmental science is expected. Course takes a topical and case-study
approach to science. Laboratory emphasizes professional skills. This course counts toward the natural science component of the University Core Curriculum.

ESCI 1490. 1-4 sem. hrs. SELECTED TOPICS
Subject materials variable. May be repeated for credit when topics are significantly different. Faculty approval required.

ESCI 3202. 2 sem. hrs. (2:0) PROFESSIONAL SKILLS
Presentation and discussion of selected topics relating to the professional skills of practicing environmental scientists including literature searches, reviews, paper presentation, professional and career opportunities, professional ethics.

ESCI 3351. 3 sem. hrs. (3:0) OCEANOGRAPHY
Methods and principles of oceanography. A survey of oceanography with emphasis placed on the physical processes affecting water and water masses of the world oceans. Prerequisites: CHEM 1312, or ESCI 1401 and 1402, or GEOL 1403, or permission of instructor.

ESCI 3403. 4 sem. hrs. (3:2) METEOROLOGY
Introduction to meteorology and the dynamics of planetary atmospheres. Emphasis on atmospheric accretion, composition, evolution, structure, and dynamics. Lab exercises cover basic measurement techniques, weather maps, and forecasting.

ESCI 4201. 2 sem. hrs. (2:0) SCIENTIFIC DIVING TECHNIQUES
Theory, science, and art of underwater diving technology and its application to scientific objectives. Course helps fulfill some training requirements of the Texas A&M University-Corpus Christi Guidelines for scientific diving. Prerequisite: PADI certification or permission of instructor.

ESCI 4301. 3 sem. hrs. (3:0) ENVIRONMENTAL REGULATIONS
A survey of state and federal environmental laws and regulations, and their impact on the environment. Case studies of environmental issues and legislated regulations. Prerequisites: BIOL 3443, CHEM 3343/3143, and GEOL 3443 or permission of instructor.

ESCI 4320. 3 sem. hrs. (3:0) ENVIRONMENTAL HEALTH
Overview of the toxicology and epidemiology of pollutants in the air, water and soil. Associations of environmental exposure with adverse health effects such as cancer, cardiovascular disease, and reproductive outcomes; also chemical markers and symptoms of disease. Pollutants studied include lead, asbestos, radiation, radon, noise, metals halogenated hydrocarbons, aromatic hydrocarbons, silica, indoor air quality, formaldehyde, and outdoor air pollutants.

ESCI 4330. 3 sem. hrs. (2:2) OIL SPILL PREVENTION AND RESPONSE
Historical perspective of laws and regulations governing oil spill prevention and response. Current methods for control, containment, countermeasures, removal, and disposal of oil spills in an environmentally safe manner.

ESCI 4335. 3 sem. hrs. (3:0) CLIMATE AND CLIMATE VARIABILITY
Course intended to guide environmental science majors in developing a conceptual understanding of Earth’s global climate and its variability. Review of past climates, present mean state of the climate system, climate variability from seasonal to multidecadal time scales, and climate change. Special attention given to climates of the Gulf of Mexico, Caribbean Sea and surrounding land regions. Plausible climate-change scenarios, as well as mitigation and adaptation strategies are also discussed. Prerequisite: ESCI 3351 or ESCI 3403 or instructor’s consent.

ESCI 4360. 3 sem. hrs. (3:0) PHYSICAL OCEANOGRAPHY
Physical description of the sea, physical properties of seawater and sea ice, methods and measurements, wind-driven ocean circulation, thermohaline ocean circulation, boundary processes, waves, tides and mixing. Seasonal and interannual variability such as El Niño/Southern Oscillation phenomena. Implications for marine biology, marine geology, human impacts, other topics. Prerequisites: ESCI 3351, and PHYS 1401 or PHYS 2425 or consent of instructor.

ESCI 4370. 3 sem. hrs. (2:2) HAZARDOUS WASTE OPERATIONS AND EMERGENCY RESPONSE
Study of the laws and regulations of hazardous waste management from an historical perspective followed by current techniques for handling, reducing, and disposing of hazardous wastes in an environmentally safe manner. Lab exercises in use of personal protective gear and safe handling of hazardous substances.

ESCI 4408. 4 sem. hrs (3:3) ENVIRONMENTAL MICROBIOLOGY
Relationships between microorganisms and their biotic and abiotic environment. Current topics such as air quality (i.e., molds), water quality and bioremediation will be discussed. Laboratory will include techniques for sampling from soil, air and water. Prerequisite: BIOL 2421 or consent of instructor.

ESCI 4490. 1-4 sem. hrs. SELECTED TOPICS
Subject materials variable. May be repeated for credit when topics are significantly different. Faculty approval required.

ESCI 4495. 1-4 sem. hrs. DIRECTED INDEPENDENT STUDY
Requires a formal proposal of study to be completed in advance of registration and to be approved by the supervising faculty, the Chairperson, and the Dean of the College.

ESCI 4498. 1-4 sem. hrs. (Ind. study) INTERNSHIP IN ENVIRONMENTAL SCIENCE
One to four semester hours of credit may be earned by working in an internship position in a governmental agency or industry. Prerequisite: senior environmental science majors only; requires approval of the faculty. May be repeated for credit.

FINANCE (FINA)

FINA 1307 (FINA 1307) 3 sem. hrs. PERSONAL FINANCE
Covers the foundations of financial planning, managing basic assets, managing credit, managing insurance needs, managing investments, and retirement and estate...
planning. This course is designed for nonbusiness as well as business majors to give them a basic understanding of the aspects of personal financial planning.

**FINA 3310. 3 sem. hrs.**

**FINANCIAL MANAGEMENT**
A survey of financial management issues emphasizing planning and decision making. Specific topics covered include discounted cash flow analysis, stock and bond valuation, financial intermediation, organizing, raising and managing capital, capital investment, risk analysis, and financial statement analysis. Prerequisites: ACCT 2301, ACCT 2302, BUSI 1011, MATH 1325 or equivalent and Junior standing or above.

**FINA 3312. 3 sem. hrs.**

**FINANCIAL MARKETS AND INSTITUTIONS**
Course coverage includes an analysis of financial markets and institutions; regulation, money market operations, global impact of central banking principles and monetary policy; and determinants of interest rates with financial asset pricing. Prerequisites: ECON 2301, ECON 2302, and Junior standing or above.

**FINA 3320. 3 sem. hrs.**

**INTERMEDIATE CORPORATE FINANCE**
The study of asset pricing, capital budgeting, capital management, growth through mergers, and leasing. Emphasis is on the development of problem-solving capabilities. Prerequisites: FINA 3310 and Junior standing or above.

**FINA 3331. 3 sem. hrs.**

**INVESTMENTS**
Framework of financial markets, valuation of the firm, security analysis, investment equity versus debt, efficiency of market evaluation, diversification efforts, investment goals, and portfolio selection. Prerequisites: ACCT 2301, MATH 1325 or equivalent and Junior standing or above.

**FINA 3350. 3 sem. hrs.**

**CASH MANAGEMENT**
An examination of the principles and methods of cash and liquidity management with particular attention to funds transfer procedures and requirements. Specific topics include the role of cash management in corporate financial management, a review of relevant accounting concepts, the structure of the financial environment, the system of disbursements and collections, accounts receivable management, accounts payable management, information technology and electronic commerce, cash flow forecasting, short-term investing and borrowing, financial risk management, international treasury management, and management of relationships. Prerequisites: FINA 3310 or consent of instructor and Junior standing or above.

**FINA 3351. 3 sem. hrs.**

**INSURANCE PRINCIPLES**
Fundamentals of risk management as practiced in the commercial life, health, property, and casualty insurance industries. Prerequisite: Junior standing or above.

**FINA 3354. 3 sem. hrs.**

**REAL ESTATE PRINCIPLES**
Fundamentals of real estate including site selection, legal processes and documents, financing, value determination, management, and marketing. Prerequisite: Junior standing or above.

**FINA 3355. 3 sem. hrs.**

**EMPLOYEE BENEFITS AND RETIREMENT PLANNING**
This course examines the financial aspects of retirement planning as well as employee benefit planning including group insurance plans and the characteristics of the various types of employee benefit plans: life insurance, medical expense, disability, and retirement income. Prerequisite: Junior standing or above

**FINA 4310. 3 sem. hrs.**

**ADVANCED FINANCIAL MANAGEMENT**
Application of financial management tools, examination and interpretation of financial statements, and integration of financial policy and structure on overall management of the enterprise. Prerequisites: FINA 3320 and Junior standing or above.

**FINA 4315. 3 sem. hrs.**

**INTERNATIONAL FINANCE**
A study of the institutions and relationships of the international financial system as it relates to the balance of payments, foreign exchange risk, arbitrage and the Eurocurrency market. The emphasis is on methods of arbitrage, forecasting exchange rates, and hedging against foreign exchange risk. Prerequisites: ECON 2301, ECON 2302, FINA 3310, and Junior standing or above.

**FINA 4321. 3 sem. hrs.**

**FINANCIAL INSTITUTIONS MANAGEMENT**
A study of major financial institutions and the markets in which they operate, with emphasis on financial decision making and risk management. Topics include financial intermediation theory; measurement and management of interest rate risk, credit risk, off-balance-sheet risk, foreign exchange risk, country risk, and liquidity risk; capital adequacy; and product/market diversification. Prerequisites: FINA 3310, ECON 2302, and Junior standing or above.

**FINA 4332. 3 sem. hrs.**

**SECURITY ANALYSIS AND PORTFOLIO MANAGEMENT**
Evaluation of investment securities of both private and public institutions through external analysis of financial statements and economic conditions, portfolio selection, expected return and risk selection, and conditions of market efficiency. Prerequisites: FINA 3310, FINA 3331, ORMS 3310, and Junior standing or above.

**FINA 4334. 3 sem. hrs.**

**FINANCIAL STATEMENT ANALYSIS**
A detailed study of financial reporting with emphasis upon practical interpretations. Attention will be given to financial statement analysis using financial accounting information and its finance implications. Assignments may differ depending on major. Prerequisites: ACCT 2301, ACCT 2302, FINA 3310, and Junior standing or above.

**FINA 4390. 1-3 sem. hrs.**

**CURRENT TOPICS IN FINANCE**
Selected topics for special study related to finance functions, processes or issues. May be repeated for credit when topics vary. Prerequisites: Junior standing or above, and others depending on topic. Contact the Dean’s office for information.
FINA 4396. 1-3 sem. hrs.
DIRECTED INDIVIDUAL STUDY
Individual supervised study and completion of a final report. Prerequisites: permission of instructor, Junior standing or above, and others depending on selected topic. Inquire at the Dean’s office for information.

FINA 4398. 3 sem. hrs.
INTERNSHIP IN FINANCE
Supervised full-time or part-time, off-campus training in business or government finance office. Oral and written reports required. Prerequisites: finance major, and Junior standing or above. Students must apply to program and be accepted prior to registration. May not be repeated for credit.

FRENCH (FREN)____________________

FREN 1311 (1311) 3 sem. hrs.
FRENCH I
Introduction to listening, speaking, reading, and writing skills within a French cultural framework. For students without previous knowledge of the language. (Language laboratory required. One hour per week minimum.)*

FREN 1312 (1312) 3 sem. hrs.
FRENCH II
Continued practice in listening, speaking, reading and writing skills within a French cultural framework. French 1311 or equivalent required. (Language laboratory required. One hour per week minimum.)*

FREN 2311 (FREN 2311) 3 sem. hrs.
FRENCH III
Reviews French grammar through oral and written practice with emphasis on language proficiency. Utilizes cultural readings in French to expand vocabulary and knowledge of the French culture.

FREN 2312 (FREN 2312) 3 sem. hrs.
FRENCH IV
Continued advanced development and review of all language skills within a French framework with an emphasis in the linguistic perspective. Successful completion of 2311 is required to receive credit for 2312.

FREN 3306. 3 sem. hrs.
FRENCH LIT 1800 TO PRESENT
This course will deal with a short story, a novel, a film script and a play written by three of the big names from the nineteenth and twentieth centuries, two men and a woman. Each work deals in its way with the relationships between men and women, loneliness and alienation, faith and other modern considerations. (Teleconference course)

GEOGRAPHIC INFORMATION SCIENCE (GISC)

The numbers of weekly lecture and laboratory hours associated with each course are designated by (lecture:lab) following the semester hours. Additional laboratory work may be required to complete the assignments. All courses involving labs and field trips will require appropriate fees.

GISC 1336. 3 sem. hrs. (2:2)
DIGITAL DRAFTING AND DESIGN
An introduction to graphic and drafting principles and practices in surveying and mapping science. This course includes the development of the basic drafting skills needed to produce surveying plats and graphical presentations. The elements of descriptive geometry are addressed. A major component of the course is an introduction to the fundamentals of computer-aided drafting and design (CADD.).

GISC 1470. 4 sem. hrs. (3:3)
GEOSPATIAL SYSTEMS I
Introduction to Geographic Information Systems. Acquisition and conversion of data for mapping. Spatial data mapping using GIS databases. Principles and use of GIS software. No prerequisites. (Students may not receive credit for both GISC 1470 and GEOG 1470.)

GISC 2250. 2 sem. hrs. (0:6)
FIELD CAMP I
A one-week field camp with intensive field data collection and computations. Traversing between control points. Digital contour data and leveling control. Detail spatial data by total station. Construction set out using total station and steel band. Taken during the sophomore or junior year. Prerequisite: GISC 2470.

GISC 2438. 4 sem. hrs. (3:3)
GEOSPATIAL SOFTWARE SYSTEMS I
Geospatial Systems software engineering using software database modeling and design. Software engineering of applications to solve geospatial applications. Topics include use of relational databases, VB, Java, and Script design. Prerequisites: GISC 1470 and COSC 1435.

GISC 2470. 4 sem. hrs. (2:4)
GEOSPATIAL PLANE MEASUREMENT I
Historical introduction to field measurement and mapping; distance measurement using electronic distance meters; calibration and reduction. Leveling instruments; principles, construction, testing and adjustment; ancillary equipment. Optical and electronic theodolites. Traverse computations and adjustment. Coordinate systems. Map projections. Prerequisite: GISC 1436, and co-requisites: COSC 1435 and MATH 1316.

GISC 2490. 1-4 sem. hrs.
SELECTED TOPICS
May be repeated for credit depending on topic. Variable content. Offered on request.

GISC 3301. 3 sem. hrs. (2:3)
GEOSPATIAL SYSTEMS II
Advanced spatial analysis and modeling in GIS. Sources of spatial data acquisition including GPS. Use of topology in GIS. Digital spatial data representation including visualization using vector and raster formats. Digital elevation models. Prerequisite: GISC 1470, and MATH 2413 or MATH 1316.

GISC 3325. 3 sem. hrs. (2:2)
GEODETIC SCIENCE

GISC 3300. 3 sem. hrs. (3:0)
GEOSPATIAL MATHEMATICAL TECHNIQUES
Characteristics of geographic/spatial information; overview of relevant sections of numbers, algebra and geometry, plane and spherical trigonometry, matrices, determinants and vectors, curves and surfaces, integral and differential calculus, partial derivatives, with an em-
phases on geospatial applications. Concepts of geospatial coordinate systems and geospatial coordinate transformations; overview of spatial statistics and best-fit solutions with geospatial applications. Prerequisite: MATH 2413 and MATH 2414.

GISC 3412. GEOSPATIAL PLANE MEASUREMENT II 
4 sem. hrs. (2:4)
Principles and reduction of observations and errors in spatial measurement. Techniques of horizontal and vertical angle measurement for precise positioning. Trigonometric heighting and vertical staff tacheometry. Setting out of structures. Design and computation of horizontal and vertical curves. Prerequisite: GISC 2470.

GISC 3416. PUBLIC INFORMATION IN GIS 
4 sem. hrs. (3:3)
Sources and uses of geographic information required for public policy information and analysis. Use of census data. The decision making process in public administration. The role of information policy in environmental sustainability. Prerequisites: GISC 3421 and GISC 3301.

GISC 3420. GEOSPATIAL SOFTWARE SYSTEMS II 
4 sem. hrs. (3:3)
GIS related applications. Topics covered include development and design of GIS web servers using SQL, Oracle and DB2. Real time GIS solutions with hand held mobile platforms. GIS wireless communication, VPN’s, and Geospatial Database Engines will be covered. Prerequisite: GISC 2438.

GISC 3421. VISUALIZATION FOR GIS 
4 sem. hrs. (3:3)
Basic elements of thematic cartography, cartographic theory, and cartographic projections. Integration of cartographic principles with GIS visualization. Principles of map design with GIS data. Prerequisites: GISC 1470 and MATH 2413 or MATH 1316.

GISC 4250. FIELD CAMP II 
2 sem. hrs. (0:6)
A one-week field camp undertaking projects in cadastral, engineering, hydrographic, and geodetic positioning. Reduction of digital field data to produce final plans and reports. Taken during the senior year. Prerequisites: GISC 3412, GISC 4410, and GISC 2250.

GISC 4280. GEOSPATIAL SYSTEMS INTERNSHIP 
2 sem. hrs. (0:6)
Internship education requires work with approved Geospatial Systems related industry employer. Students provide weekly written reports and final presentation to program at the end of internship. Must have completed 60 semester hours before attempting.

GISC 4305. LEGAL ASPECTS OF SPATIAL INFORMATION 
3 sem. hrs. (3:0)
Legal ownership of spatial data and information collected in the public sector. Public access to large digital databases. Copyright law as applied to spatial data. Legal issues related to property boundaries, statutory boundaries, voter district boundaries, and jurisdictional boundaries. Government fees and charges for access to spatial data. Social and economic value of spatial data. Prerequisites: GISC 2470.

GISC 4315. SATELLITE POSITIONING 
3 sem. hrs. (2:2)

GISC 4320. HYDROGRAPHY 
3 sem. hrs. (2:2)
Introduction to offshore and inshore hydrographic mapping. Tidal datums and their computation. Review of hydrographic and nautical charts. Electronic position finding and bathymetric data collection. Echo soundings, side scan sonar. Seafloor mapping and underwater location. Beach (combined land and hydrographic) mapping. Prerequisites: GISC 2470 and MATH 2413.

GISC 4326. GEOMATICS PROFESSIONAL PRACTICE 
3 sem. hrs. (2:2)
An intensive one-week summer course presented by practicing geomatics professionals covering many of the aspects of operating a professional surveying practice in the State of Texas. Topics cover surveyor responsibility and liability, the surveyor in court, standards of practice, surveying mathematics, Texas coordinate system, celestial observations, and project control. Prerequisite: GISC 2250.

GISC 4335. GEOSPATIAL SYSTEMS III 
3 sem. hrs. (2:2)
3D spatial analysis in GIS. Networking functions in GIS. GIS WWW servers. Visualization and data quality issues. User needs and management of geographic information systems; system life cycle; development; costs and benefits. A significant part of course work will include GIS assignments using ArcInfo. Prerequisite: GISC 3301 and GISC 2438.

GISC 4340. GEOSPATIAL COMPUTATIONS & ADJUSTMENT 
3 sem. hrs. (3:0)
The theory of least squares adjustment of spatial data. Use of matrices for the solution of equations. Propagation of variances and statistical testing of adjustment solutions. Error ellipses and confidence intervals. Use of spatial data reduction software. Prerequisites: GISC 2470, MATH 3342, and GISC 3400.

GISC 4350. GEOSPATIAL SYSTEMS PROJECT 
3 sem. hrs. (0:6)
Requires a formal proposal of study to be completed in advance of registration and to be approved by the supervising faculty. Prerequisite: GISC 4335.

GISC 4371. HISTORY OF TEXAS LAND OWNERSHIP 
3 sem. hrs. (3:0)

GISC 4410. CADAstral MAPPING AND RECORDS 
4 sem. hrs. (3:2)
and rural cadastral issues. Use of coordinate systems in cadastral mapping. Prerequisite: GISC 3412.

GISC 4420. 4 sem. hrs. (3:3)
GEOSPATIAL SYSTEMS DESIGN
Design and engineering of a GIS solution. Research of integrated Earth monitoring systems with real-time data flow analysis. Communication network systems, data quality analysis, and user needs and management of geographic information systems; system life cycle; development; costs and benefits. Prerequisite: GISC 4335.

GISC 4431. 4 sem. hrs. (3:3)
REMOTE SENSING
Introduction to the acquisition, manipulation, and interpretation of global data sets acquired in the visible to microwave portion of the electromagnetic spectrum from orbital platforms. Rudimentary programming assignments will be used to demonstrate data structures, data normalization, and information extraction. Prerequisite: GISC 3400.

GISC 4590. 1-5 sem. hrs.
SELECTED TOPICS
May be repeated for credit depending on topic. Variable content. Offered on request.

GISC 4596. 1-5 sem. hrs.
DIRECTED INDEPENDENT STUDY
See College description. Offered on request. May be repeated for credit.

GISC 4690. 1 sem. hr. each term
CO-OPERATIVE EDUCATION
Co-op education allows students to take time off their full-time studies to gain valuable experience-based learning with employers willing to put on students for a semester (14 weeks), six months, or over the summer. The Co-op program allows students to maintain their full-time status as a student (continue health insurance coverage with parents, not effect student loan repayment, access to college activities, etc.) while undertaking work in their field of interest. The Co-op program is a partnership between the employer, the student, and the university. Prerequisite: acceptance by Cooperative Education Coordinator.

GEOGRAPHY (GEOG)

Geography courses are offered for students who wish to increase their knowledge of various regions of the world. These courses are offered as electives in support of major study areas in the College of Liberal Arts and the Minor in Geography. For a description of the Minor in Geography, please see the College of Science and Technology section of this catalog.

The numbers of weekly lecture and laboratory hours associated with each course are designated by (lecture:lab) following the semester hours (1 lab hour = 3 contact hours). Additional laboratory work may be required to complete the assignments. All courses involving labs will require appropriate fees.

GEOG 1300 (GEOG 1300) 3 sem. hrs.
WORLD GEOGRAPHY
This is a survey course of the major regions of the world. The significant physical and cultural aspects of each region will be covered.

GEOG 1470. 4 sem. hrs. (3:2)
GEOGRAPHIC INFORMATION SYSTEMS I
Introduction to topics in modern geography, including elements of Physical Geography (studies of the atmosphere, ocean, and land, surface environments) and an introduction to Geographic Information Systems (GISC.) A significant part of course work will include computer-assisted mapping and GISC assignments. Prerequisite or corequisite: COSC 1315. (Credit may not be given for both this course and GISC 1470.)

GEOG 3331. 3 sem. hrs.
GEOGRAPHY OF NORTH AMERICA
This course introduces the five themes in geography and uses these themes to analyze the relationships between the physical and cultural aspects of the United States. The textbook information will be supplemented with satellite images and visual materials to enhance the learning experience of the student.

GEOLOGY (GEOL)_________________

Weekly lecture and laboratory hours associated with each course are designated by (lecture:lab) following the semester hours. The indicated laboratory hours are laboratory instructional time. In most cases additional laboratory time will be required to complete assigned work. All courses involving labs and field trips will require appropriate fees. Prerequisites for geology courses may be waived only by permission of the instructor.

GEOL 1301. 3 sem. hrs. (3:0)
INTRODUCTION TO THE EARTH SCIENCES
One-semester introductory earth science course for students majoring in a non-science subject area. Origin, composition, and evolution of our planet, as well as geologic phenomena that affect everyday life, including global change, earthquakes, volcanism, desertification, flooding and erosion, groundwater, mineral resources, and plate tectonics. May not be counted toward a degree in Geology or Environmental Sciences. Will not substitute for GEOL 1403.

GEOL 1403 (GEOL 1403) 4 sem. hrs. (3:2)
PHYSICAL GEOLOGY
The origin, classification, and composition of Earth materials. Internal and surface processes that modify Earth and other planets. Laboratory studies of minerals, rocks, and topographic, physiographic, and geologic maps. This course counts toward the natural science component of the University Core Curriculum.

GEOL 1404 (GEOL 1404) 4 sem. hrs. (3:2)
HISTORICAL GEOLOGY
Origin and evolution of Earth and other planets. Changes in the form and distribution of Earth’s continents and oceans, and succession of plants and animals through geologic time. Laboratory studies of fossils, planetary, geological maps, and the interpretation of ancient environments of rock formation. This course counts toward the natural science component of the University Core Curriculum.

GEOL 2101. 1 sem. hr. (0:2)
GEological FIELD EXPLORATIONS
Introduction to basic field skills in geology and other field-based sciences. Basic techniques in safe field practices, collection of field observations, note taking, and
scientific reasoning. Three- to four-day field excursion to areas that display a variety of geologic phenomena within Texas and adjacent states. Field trip destinations may vary from year to year.

GEOL 3315. 3 sem. hrs. (3:0)
GEOCHEMISTRY
Chemical processes responsible for the distribution of elements in the solid Earth, its oceans, and the atmosphere and changes as a function of time. Review of mathematical and chemical foundations, basic thermodynamic principles, and phase relationships. Discussion of the inorganic, organic, and isotopic geochemistry of the Earth’s major systems (lithosphere, hydrosphere, and atmosphere). Prerequisites: CHEM 1311/1111, CHEM 1312/1112, and MATH 2413.

GEOL 3326. 3 sem. hrs. (2:3)
INTRODUCTION TO GEOLOGICAL FIELD METHODS
Introduction to the basic techniques of geological fieldwork. Note taking in the field, proper use of geological field equipment, measurement and description of rock sections by several methods and degrees of detail, plus small area mapping of several types of terrain with topographic maps. Reports, sections, and maps will be produced from the field notes. Field trips required. Prerequisites: GEOL 1403, GEOL 1404, and GEOL 3411 (may be taken concurrently.)

GEOL 3329. 3 sem. hrs. (3:0)
GEOLGY OF NATIONAL PARKS
Selected U.S. National Parks provide a basis to introduce students to the regional geology of the United States. Course covers about 25 U.S. National Parks representing a wide variety of geologic settings. Topics include: scenery developed by weathering and erosion on flat-lying rocks; caves and reefs; landscapes shaped by continental or alpine glaciation; volcanic features and volcanic activity; landscapes and structures in areas of complex mountains. Course includes review of major geologic principles and basic geologic concepts such as plate tectonics. Prerequisites: GEOL 1403 or GEOL 1404.

GEOL 3411. 4 sem. hrs. (3:2)
MINERALOGY
Study of the physical and chemical properties of minerals. Introduction to the crystallography of minerals, optical mineralogy, and the use of the polarized light microscope. Laboratory study of mineral identification in hand specimens, and thin sections. Prerequisites: GEOL 1403, CHEM 1311, and CHEM 1312 (may be taken concurrently.)

GEOL 3414. 4 sem. hrs. (3:2)
IGNEOUS AND METAMORPHIC PETROLOGY
Genesis and occurrence of igneous and metamorphic rocks. Mineralogical composition and thermodynamics of geologic systems. Determination of rock types in hand specimens and thin sections. Prerequisite: GEOL 3411.

GEOL 3441. 4 sem. hrs. (3:2)
INVERTEBRATE PALEONTOLOGY
Morphology, classification, and paleoecology of fossil invertebrates. Applications to marine geology including paleoceanography, stratigraphy, economic geology. Field trip to Texas invertebrate fossil beds. Prerequisite: GEOL 1404 or permission of instructor.

GEOL 3442. 4 sem. hrs. (3:2)
GEOMORPHOLOGY
Study of Earth and planetary surfaces. Physical and chemical processes that create and modify surface features. Prerequisite: GEOL 1403 or permission of instructor.

GEOL 3443. 4 sem. hrs. (3:2)
ENVIRONMENTAL GEOLOGY
Study of the relationships of humans to Earth’s physical environment. Geologic aspects of waste disposal, resources, conservation, land reclamation, geologic hazards, and land-use planning. Prerequisite: GEOL 1403, and science major or minor, or permission of instructor.

GEOL 3490. 1-4 sem. hrs.
SELECTED TOPICS
May be repeated for credit if topics are significantly different. Subject materials variable. Faculty approval required.

GEOL 4316. 3 sem. hrs. (3:0)
MARINE GEOSCIENCE
Introduction to the geology of the marine environment. Review of plate tectonic processes relevant to the evolution of continental margins and plate boundaries; geophysics and ocean morphology; geology of ocean crust; controls on the types, origin, and distribution of marine sediments; marine geochemistry; nearshore geological processes and the continental shelf; introduction to paleoceanography; global paleoceanographic evolution; critical events in ocean history. Special focus on the Gulf of Mexico. Prerequisites: GEOL 1403, GEOL 1404, CHEM 1311, CHEM 1312.

GEOL 4322. 3 sem. hrs. (3:0)
GEOPHYSICS
Introduction to quantitative techniques to assess physical properties and processes of the Earth. Topics include earthquake seismology, refraction and reflection seismology, gravimetry, magnetism, electrical methods, and radioactivity of Earth materials. Application of geophysical methods to the study of the Earth, in oil and gas exploration, and in economic and environmental geology. Prerequisites: GEOL 4421, PHYS 1401 or 2425, PHYS 1402 or 2426, MATH 2413, or permission of instructor.

GEOL 4324. 3 sem. hrs. (1:3)
MODERN SHORELINE DEPOSITIONAL SYSTEMS
Basic principles of modern depositional systems and sedimentology. Field introduction to the basic concepts of clastic sedimentology, neohichnology, and sequence stratigraphy for those new to the subject and a comprehensive review for those familiar with the basic ideas of sedimentology and sequence stratigraphy. Field trips required. Prerequisites: GEOL 1403 (or equivalent), GEOL 4411 (or equivalent) or permission of instructor.

GEOL 4326. 3 sem. hrs. (1:4)
FIELD SEMINAR IN GEOLOGY
Field seminar in geology is designed to prepare students for summer field camp. Students will learn the basic techniques of geologic mapping in the field. The mapping project is framed as a problem in applied geology and involves independent problem solving, data analysis
GEOL 4411. 4 sem. hrs. (3:2)
SEDIMENTATION AND STRATIGRAPHY
Composition and origin of sediments and sedimentary rocks. Description and classification of rocks in hand specimen. Principles of stratigraphy, including stratigraphic units and correlation. Facies models for major depositional systems. Field trips. Prerequisites: GEOL 1403, GEOL 1404, GEOL 3411 (may be taken concurrently) and GEOL 3442, or permission of instructor.

GEOL 4421. 4 sem. hrs. (3:2)
STRUCTURAL GEOLOGY
Geometric and quantitative description of deformation of the Earth’s crust, mechanics of brittle and crystal-plastic deformation processes of Earth materials, introduction to continuum mechanics of geologic systems, crustal deformation from micro-scale to global tectonics. Laboratory introduces principles of three-dimensional data representation and analysis, geologic map interpretation, cross-section techniques, and problems in stress and strain analysis. Prerequisites: GEOL 3411, MATH 2413, PHYS 1401 or 2425.

GEOL 4430. 1-4 sem. hrs. (Ind. study)
INTERNSHIP IN GEOLOGY
One to four semester hours of credit may be earned by working in a non-paying, internship position in industry, with local government, private firm, or independent geologist. Prerequisite: Senior geology majors only; requires approval of the geology faculty. May be repeated for credit, but only four semester hours will count towards degree.

GEOL 4436. 4 sem. hrs. (3:2)
INTRODUCTION TO PETROLEUM GEOLOGY
Introduction to the basic concepts of petroleum geology and techniques used in the exploration and production of hydrocarbon systems. Lectures and lab exercises will cover principles of stratigraphy, sedimentology, hydrocarbon generation, hydrocarbon-trapping mechanisms, reservoir characterization, seismic interpretation, and well-log interpretation, and geologic risk analysis. Prerequisites: GEOL 4411 (may be taken concurrently.) Recommended: GEOL 4322 and GEOL 4421.

GEOL 4444. 4 sem. hrs. (3:2)
HYDROGEOLOGY
Introduction to fluid flow in geologic systems with an emphasis on groundwater and on the physical and chemical principles that control groundwater flow in the subsurface. Topics include the hydrologic cycle; physics of fluid flow in porous media, mathematical descriptions of groundwater flow, and geology of groundwater occurrences. Prerequisites: GEOL 1403, PHYS 1401 or 2425, and MATH 2413, or permission of instructor. GEOL 4490.1-4 sem. hrs.
SELECTED TOPICS
May be repeated for credit if topics are significantly different. Subject materials variable. Faculty approval required.

GEOL 4496. 1-4 sem. hrs.
DIRECTED INDEPENDENT STUDY
Requires a formal proposal of study to be completed in advance of registration and to be approved by the supervising faculty, the chairperson, and the Dean of the College.

GEOL 4650. 6 sem. hrs. (0:12)
FIELD GEOLOGY
Field course involving practical application of geologic principles to field problems. Field mapping and outcrop data collection in outcrops of all types; measurement of stratigraphic sections; mapping and preparation of geologic cross-sections; preparation of a geologic report. Six-week course will involve a variety of mapping and data collection and analysis problems on the Texas Gulf Coast and in West Texas, New Mexico, and Utah. Prerequisites: GEOL 3326, GEOL 3414, GEOL 4411, GEOL 4441, GEOL 4421. Recommended: GEOL 4326.

GERMAN (GERM)___________________

GERM 1311 (GERM 1311) 3 sem. hrs.
GERMAN I
Introduction to listening, speaking, reading, and writing skills within a German cultural framework. For students without previous knowledge of the language. (Language laboratory required. One hour per week.)

GERM 1312 (GERM 1312) 3 sem. hrs.
GERMAN II
Continued practice in listening, speaking, reading, and writing skills within a German cultural framework. German 1311 or equivalent required. (Language laboratory required. One hour per week.)

GERM 2311 (GERM 2311) 3 sem. hrs.
GERMAN III
Reviews German grammar through oral and written practice with emphasis on language proficiency. Utilizes cultural readings in German to expand vocabulary and knowledge of the German culture.

GERM 2312 (GERM 2312) 3 sem. hrs.
GERMAN IV
Continued advanced development and review of all language skills within a German framework with an emphasis in the linguistic and cultural perspective. Successful completion of 2311 is required to receive credit for 2312. * A lab fee is required for this course.

HEALTH (HLTH)____________________

HLTH 2370. 3 sem. hrs.
INTRODUCTION TO HEALTH
Concepts essential to understanding the health profession: competencies and career opportunities for professional health educators in school and community settings.

HLTH 3342. 3 sem. hrs.
SEXUALITY IN HEALTH EDUCATION
Many aspects of human sexuality; physiology and function of human reproductive system, factors involved in learning sex roles, biological and emotional motivations associated with the sexual aspects of life and their relationship to marriage and family planning.

HLTH 3353. 3 sem. hrs.
SUBSTANCE ABUSE AND HEALTH
A basic knowledge and understanding of the physiological, psychological, social, environmental and behavioral
aspects of drug use and abuse in this country to prepare students to make mature and responsible decisions regarding drug use and to assist others in making similar decisions affecting drug-taking behavior.

**HLTH 3361.** 3 sem. hrs. 
**CONSUMER HEALTH**
This course is designed to provide general concepts, strategies and sources of information in selecting health products and services.

**HLTH 3371.** 3 sem. hrs. 
**COMMUNITY AND ENVIRONMENTAL HEALTH**
An overview of the function, organization, and leadership of health agencies at the national, state, and local levels as well as the dimensions of health affected by our environment.

**HLTH 4308.** 3 sem. hrs. 
**ORGANIZATION AND ADMINISTRATION OF HEALTH**
Theory and practice in the development and use of creative and traditional health education strategies in schools, community settings; emphasis is given to cognitive, affective and behavioral teaching strategies.

**HLTH 4310.** 3 sem. hrs. 
**EXERCISE AND HEALTH**
Interdisciplinary planning and implementation of exercise programs in school, community and worksite settings; applied exercise physiology, nonclinical exercise assessment; exercise-education strategies to promote adherence in health related exercise programs.

**HLTH 4325.** 3 sem. hrs. 
**PROGRAM DEVELOPMENT AND EVALUATION**
Theory and practice in evaluation of health programs in school and community; analysis of test results; evaluation of standardized health tests.

**HLTH 4350.** 3 sem. hrs. 
**CREATIVE LIFE STYLES FOR WELLNESS**
A course supporting knowledge, attitudes, skills, and behaviors in the five wellness dimensions physical, social, emotion, intellectual, and environmental. Special emphasis will be placed on personal enrichment.

**HLTH 4696.** 1-6 sem. hrs. 
**DIRECTED INDIVIDUAL STUDY**
Programs will be designed for individual cases through special permission of the Department Chair and Dean. May be repeated for credit when the topic varies.

**HEALTH SCIENCES (HLSC)**

The numbers of weekly lecture and laboratory hours associated with each course are designated by (lecture:lab) following the semester hours (1 lab hour = 3 contact hours.) Additional laboratory work may be required to complete the assignments. All courses involving labs will require appropriate fees.

**HLSC 3300.** 3 sem. hrs. (3:0) 
**THE HEALTH CARE SYSTEM**
Overview of health and health care in the United States. Emphasis placed on various structural, economic, political, and financial components of the health care system. Roles of government, individuals and health care providers in the design and delivery of health care in the United States are explored. Should be taken during first semester of Health Sciences courses.

**HLSC 3310.** 3 sem. hrs. (3:0) 
**EPIDEMIOLOGY**
Introduction to basic concepts, principles and methods of epidemiology with emphasis on prevention and control of public health problems.

**HLSC 3320.** 3 sem. hrs. (3:0) 
**MARKETING AND TRANSCULTURAL HEALTH**
Introduction to provision of health care services congruent with consumers’ lifestyles using a marketing focus and health communications.

**HLSC 3330.** 3 sem. hrs. (3:0) 
**FINANCIAL MANAGEMENT IN HEALTH CARE**
Introduction to health care accounting, financial management, and finance with a special emphasis on coding and classification methodologies, including ICD-9-CM, CPT, DRG and APC, used in health care reimbursement.

**HLSC 3340.** 3 sem. hrs. (3:0) 
**QUANTITATIVE METHODS IN HEALTH CARE**
Introduction to quantitative methods applicable to health care. Operations management topics and research methodologies and statistics will be examined. Prerequisite: MATH 1442, 1342, or 2342.

**HLSC 3350.** 3 sem. hrs. (3:0) 
**INFORMATION SYSTEMS AND TECHNOLOGY IN HEALTH CARE**
Overview of health care information systems with special emphasis on locating health resources via the internet. Satisfies university computer literacy requirement.

**HLSC 3370.** 3 sem. hrs. (3:0) 
**COMPLEMENTARY & ALTERNATIVE MEDICINE**
Introduction to complementary and alternative medicine with an emphasis on related economic, political, legal, and social issues.

**HLSC 4300.** 3 sem. hrs. (3:0) 
**MANAGEMENT & ORGANIZATION BEHAVIOR IN HEALTH CARE**
Introduction to principles of management and organization behavior in healthcare with emphasis on human resource management topics and issues.

**HLSC 4310.** 3 sem. hrs. (3:0) 
**HEALTH LAW**
Introduction to law and the legal system with special emphasis on health related topics and issues.

**HLSC 4340.** 3 sem. hrs. (3:0) 
**QUALITY MANAGEMENT & EVALUATION IN HEALTH CARE**
Introduction to principles of quality assessment and outcome management, and application of Total Quality Management principles in healthcare organizations.

**HLSC 4390.** 1-3 sem. hrs. 
**SELECTED TOPICS IN HEALTH SCIENCE**
Selected topics for special study related to health science issues. May be repeated for credit when topics vary. Not required for the BSHS but may be used to fulfill elective requirement.

**HLSC 4396.** 1-3 sem. hrs. 
**DIRECTED INDEPENDENT STUDY**
Permission of Instructor required. Course not required for the BSHS but may be used to fulfill elective requirement.
Course Descriptions

HLSC 4680. 6 sem. hrs. (1:15)
PRACTICUM
Applied, institution-based project. Prerequisite: Completion of all 1000, 2000 and 3000-level courses.

HLSC 4680. 6 sem. hrs. (1:15)
PRACTICUM
Applied, institution-based project. The student must complete the immunization and background check requirements listed in the Undergraduate Course Catalog under Health Sciences Bachelor of Science before beginning the practicum experience. Prerequisite: Completion of 1000, 2000 and 3000-level courses or last 12 semester credit hours of degree completion.

HISTORY (HIST)

HIST 1301 (HIST 1301) 3 sem. hrs.
U.S. HISTORY TO 1865
A survey of the political, social, economic, military, cultural and intellectual history of the United States from 1492 to 1865. Satisfies the university core curriculum requirement in U.S. History.

HIST 1302 (HIST 1302) 3 sem. hrs.
U.S. HISTORY SINCE 1865
A survey of the political, social, economic, military, cultural and intellectual history of the United States from 1865 to the present. Satisfies the university core curriculum requirement in U.S. History.

HIST 2311 (HIST 2311) 3 sem. hrs.
WESTERN CIVILIZATION I
Survey of the cultures and civilizations of the Ancient Mediterranean world and the political, social, economic, military, cultural, and intellectual influences shaping the emergence and development of Europe to 1500.

HIST 2312 (HIST 2312) 3 sem. hrs.
WESTERN CIVILIZATION II
A survey of the political, social, economic, military, cultural, and intellectual development of Europe from 1500 to the present.

HIST 3302. 3 sem. hrs.
LATIN AMERICAN HISTORY
An overview of important Latin American themes from 1400 to the present.

HIST 3315. 3 sem. hrs.
EUROPE 1750—1815
Explores the processes which contributes to the establishment of a new political, economic, and social order in Europe. The course includes an in-depth focus upon the causes and consequences of the French Revolution as well as an examination of the European response to Napoleon.

HIST 3317. 3 sem. hrs.
EUROPE 1815—1914
The evolution of European industrial society from the Congress of Vienna to the outbreak of World War I. Themes include changes in the nature of work and family life, urbanization, and the emergence and growth of liberalism, socialism, nationalism, and romanticism as competing ideologies.

HIST 3319. 3 sem. hrs.
EUROPE 1914 TO THE PRESENT
Political, social, economic and cultural developments since 1914: includes the impact of World War I, the Russian Revolution, Fascism, the origins of the Cold War, the tension between European unification and growing ethnic tensions and the dissolution of the Soviet empire.

HIST 3320. 3 sem. hrs.
COLONIAL & REVOLUTIONARY U.S.
Traces regional economic, social, and political change in the Americas from 1607 to the end of the Revolution.

HIST 3321. 3 sem. hrs.
THE EARLY AMERICAN REPUBLIC
This course examines American history from the end of the revolutionary war to 1850. Political, economic, and social issues including, but not limited to, the creation of the Constitution, the development of the first and second party systems, the market revolution, antebellum reform, the Old South, and westward expansion.

HIST 3323. 3 sem. hrs.
CIVIL WAR AND RECONSTRUCTION
Background and causes of the Civil War; military, political, diplomatic, and economic developments during the War; Reconstruction and post-war adjustments.

HIST 3324. 3 sem. hrs.
US GILDED AGE AND PROGRESSIVE ERA
An examination of the dramatic period when the United States definitively settled the remaining portions of the continent and decisively moved towards becoming an industrial, urban nation with world-wide economic and political influence.

HIST 3325. 3 sem. hrs.
EMERGENCE OF MODERN U.S.
Study of American life from World War I through World War II. Topics include America’s rise to a world power, the social, cultural, and political effects of corporate enterprise, urbanization, and immigration, women’s suffrage, the Twenties, and the New Deal.

HIST 3326. 3 sem. hrs.
U.S. SINCE 2ND WORLD WAR
A study of American life and development as a world power since World War II.

HIST 3331. 3 sem. hrs.
TEXAS HISTORY
Spanish colonial period, Mexican statehood, independence, the development of the Republic, annexation and growth as a state.

HIST 3335. 3 sem. hrs.
THE U.S. URBAN EXPERIENCE
A general survey of the social, cultural, and political history of the American city, with particular emphasis on Corpus Christi and the ways our city illustrates these larger trends.

HIST 3340. 3 sem. hrs.
MODERN EAST ASIA
This course will examine East Asia from 1800 to the present. While placing an emphasis on China, Japan and Southeast Asia, it also deals with other nations and peoples of the region. Topics include politics, the nation state, colonialism, empire, war, nationalism, the Cold War and revolution, all in a historical context.

HIST 4320. 3 sem. hrs.
U.S. CULTURAL EXPERIENCE
Explores ways that the myriad groups who have made up American society from the colonial period to the “information age” understood and expressed themselves and related to each other. (The chronological scope of this course may vary.)
HIST 4325. U.S. BUSINESS & LABOR HISTORY
The development of American business and its effect on the structure and experience of work from the age of the artisan through the period of the multinational corporation.

HIST 4327. U.S. MODERN POPULAR CULTURE
The historical development of modern popular culture—including television, movies, fiction, newspapers, music and consumption—and its effect on the structure and experience of U.S. society and work from the nineteenth century to the present.

HIST 4335. THE MILITARY AND UNITED STATES HISTORY
The development of U.S. military strategy and policy from the Colonial Wars through Vietnam.

HIST 4336. MEXICAN AMERICAN HISTORY
Spanish and Mesoamerican backgrounds, conquest and mestizaje, settlement of Aztlán, interaction with Anglo-Americans, 20th century immigration, urbanization, identity, the Chicano Movement, and Mexican American organizational/political development.

HIST 4337. UNITED STATES WOMEN'S HISTORY
Themes include transformations in the notion of womanhood and of sexual differences, changes in the structure, function, and concept of “family” and “household,” and historical factors that have shaped women’s role in the work force and public life.

HIST 4340. EUROPEAN WOMEN'S HISTORY
Study of the experiences of European women from the 18th to the 20th centuries. Also addresses the role that gender has played in the development of modern European societies. Some topics covered are women and the French Revolution, gender and class in industrial Europe, feminism and suffrage, and women and fashion.

HIST 4342. THE HOLOCAUST
Examines the Holocaust by exploring the role of racism and anti-Semitism, the rise of Nazi policies, Jewish responses and resistance to them, deportation and genocide, the role of war, and the aftermath and memory of an event “beyond human imagination.”

HIST 4345. EUROPEAN THOUGHT AND CULTURE, 1750-PRESENT
Survey of the major European intellectual and cultural movements from the Enlightenment to the present. Broader than a traditional course in intellectual history, special attention will be given to the emergence and development of the concepts of “modernity” and the challenges of “postmodernity.”

HIST 4373. MEXICO: THE COLONIAL PERIOD
Outlines the colonial foundations of modern Mexico by tracing economic, social, and political change from European contact to independence.

HIST 4374. MEXICO: THE NATIONAL PERIOD
Traces economic, social, and political change in Mexico from independence to the present.

HIST 4385. HISTORICAL RESEARCH AND WRITING
The study and writing of history, with emphasis on historical analysis, research, and writing. Designed as the capstone course for history majors and prospective social science teachers. This course will feature a senior research paper, and should be taken during the student’s final year of undergraduate study. Required of all history majors and those seeking social studies teaching certificates.

HIST 4390. TOPICS IN HISTORY
Study of significant periods, countries, regions, or themes in history. May be repeated when topics vary. Offered on sufficient demand.

HIST 4396. DIRECTED INDIVIDUAL STUDY
See College description. Offered on application.

HIST 4398. APPLIED EXPERIENCE
See College description. Offered on application.

HONORS (HONR)

HONR 3340. ACADEMIC AND FIELD RESEARCH
An examination of the assumptions and questions underlying research methods across disciplines, with special emphasis on how methodologies from different fields (such as science and humanities) can complement each other. The course will involve experts from across the university who will address issues such as 1) the distinct qualities of quantitative and qualitative research, 2) current uses of surveys, interviews, and market research, 3) the construction of new knowledge in various disciplines, from problem to publication, 4) the critical use and evaluation of electronic and print resources, archival materials, government documents, and scholarly lists.

HONR 3390. TOPICS IN THE HUMANITIES
Significant contemporary issues in arts, humanities, and education. Subject matter rotates and is determined by the honors director and the Honors Council through competitive submission from university faculty based on the course’s interdisciplinary design. May be repeated when topics vary.

HONR 3490. TOPICS IN THE SCIENCES
Significant contemporary issues in the disciplines of sciences, health sciences, social sciences, and business. Subject matter rotates and is determined by the honors director and the Honors Council through competitive submission from university faculty based on the course’s interdisciplinary design. May be repeated when topics vary.

HONR 4195. PROJECT OF EXCELLENCE
A senior capstone experience required of all honors students who graduate from the program. The Project of Excellence consists of a paper, performance, or presentation of research results typical of professional work in the major field. The project is approved beforehand by the Honors Council and major department in which the
student is enrolled, and supervised by an honors faculty member. Results of the Project of Excellence will be presented publicly to honors students and faculty at the end of the semester. In addition, as part of this course students must complete and submit the Student Honors Portfolio.

HONR 4390. (3 sem. hrs.)
SEMINAR IN THE HUMANITIES
Study of specialized topics and themes in arts, humanities, and education. May be repeated when topics vary.

HONR 4396. (1-3 sem. hrs.)
HONORS DIRECTED INDEPENDENT STUDY
Individual supervised study / research. Requires a formal proposal of study to be completed in advance of registration to be approved by a supervising faculty member and the Honors Council, and result in a written product submitted to the faculty member and Honors Program office. For students with junior standing or above. Only 3 semester hours of Honors independent study credit may be counted toward the Honors graduation requirement.

HONR 4397. (1-3 sem. hrs.)
HONORS INTERNSHIP
Practical experience in the student’s major field. Activity must be connected to an academic research question and a body of knowledge that addresses some aspect of the activity to be undertaken. At the close of the internship, a written report and self-assessment must be submitted to a supervising faculty member and the Honors Program office. Offered by pre-approved application to the Honors Council. For students with junior standing or above. Only 3 semester hours of Honors internship or applied experience credit may be counted toward the Honors graduation requirement.

HONR 4398. (1-3 sem. hrs.)
HONORS APPLIED EXPERIENCE
Practical experience connected to the student’s field of study, usually with a service or leadership component. Activity must be connected to an academic research question and a body of knowledge that addresses some aspect of the activity to be undertaken, and result in a written product submitted to a supervising faculty member and the Honors Program office. Offered by pre-approved application to the Honors Council and graded “credit” or “no credit.” Applied experience courses will include no less than 45 hours (for one credit) and no more than 135 hours of work experience (for three credits.) For students with junior standing or above. Only 3 semester hours of Honors applied experience credit may be counted toward the Honors graduation requirement.

HONR 4490. (3-4 sem. hrs.)
SEMINAR IN THE SCIENCES
Study of specialized topics and themes in the sciences, health sciences, social sciences, and business. May be repeated when topics vary.

KINESIOLOGY (KINE)_________________________

KINE 1101. 1 sem. hr.
BEGINNING RACQUETBALL
Instruction and practice in the skills, rules, and strategies of racquetball. May be repeated once for credit by non-Kinesiology majors. Materials fee required.

KINE 1102. 1 sem. hr.
SWIMMING
Instruction and practice in the techniques, skills and safety practices for levels of swimming. May be repeated once for credit by non-Kinesiology majors. Materials fee required.

KINE 1103. 1 sem. hr.
BADMINTON
Instruction and practice of badminton skills, rules and strategy. May be repeated once for credit by non-Kinesiology majors. Materials fee required.

KINE 1104. 1 sem. hr.
GYMNASTICS
Skills, techniques, safety practices, rules and scoring criteria for gymnastics. May be repeated once for credit by non-Kinesiology majors. Materials fee required.

KINE 1105. 1 sem. hr.
SAILING
Instruction and practice in skills and safety involved in sailing. May be repeated once for credit by non-Kinesiology majors. Materials fee required.

KINE 1106. 1 sem. hr.
WEIGHT TRAINING
The study and practice of physiological principles related to training programs for the development of muscular strength and endurance. May be repeated once for credit by non-Kinesiology majors. Materials fee required.

KINE 1107. 1 sem. hr.
KARATE
Instruction and practice of contemporary techniques of karate. May be repeated once for credit by non-Kinesiology majors. Materials fee required.

KINE 1108. 1 sem. hr.
STRENGTH CONDITIONING FOR WOMEN
The study and practice of physiological principles relating to training programs for the development of muscular strength and endurance for women. Materials fee required.

KINE 1109. 1 sem. hr.
RHYTHMIC AEROBICS
A study of dance movement as it relates to physical fitness development. May be repeated once for credit by non-Kinesiology majors. Materials fee required.

KINE 1110. 1 sem. hr.
INDIVIDUAL/DUAL/LIFETIME SPORTS
Instruction, participation, and practice in a variety of individual, dual, and lifetime sports. Materials fee required.

KINE 1111. 1 sem. hr.
BEGINNING GOLF
The study of techniques and knowledge pertinent to the game of golf. May be repeated once for credit by non-Kinesiology majors. Materials fee required.

KINE 1112. 1 sem. hr.
PERSONAL SELF DEFENSE
Instruction and practice of contemporary techniques of self protection. May be repeated once for credit by non-Kinesiology majors. Materials fee required.

KINE 1113. 1 sem. hr.
TENNIS
Instruction and practice of techniques, skills, and strategy involved in tennis. May be repeated once for credit by non-Kinesiology majors. Materials fee required.
KINE 1114. VOLLEYBALL
Instruction and practice of techniques, skills and strategy involved in volleyball. Materials fee required.

KINE 1115. SOCCER
Instruction and practice of techniques, skills, and strategies involved in soccer. Materials fee required.

KINE 1116. RANGER LEADERSHIP LABORATORY
Practical leadership and teamwork training in rappelling, rope bridges, weapons firing, map reading and land navigation, water safety, patrolling, and other ranger skills. Includes a weekend field trip where the techniques learned will be applied in competitive events. Cross listed with MSCI 1172. May be repeated for credit. Prerequisite: approval of Professor of Military Science.

KINE 1117. BASKETBALL
Instruction and practice of techniques, skills, and instructional strategies involved in basketball. Materials fee required.

KINE 1118. SOFTBALL
Instruction and practice of techniques, skills, and instructional strategies involved in softball. Materials fee required.

KINE 1119. BASEBALL
Instruction and practice of techniques, skills, and instructional strategies involved in baseball. Materials fee required.

KINE 1120. FOOTBALL
Instruction and practice of techniques, skills, and instructional strategies involved in football. Materials fee required.

KINE 1121. TRACK AND FIELD
Instruction and practice of techniques, skills, and instructional strategies involved in track and field. Materials fee required.

KINE 1122. NON-TRADITIONAL TEAM SPORTS
Instruction and practice of techniques, skills and instructional strategies involved in non-traditional team sports. Typical topics may include lacrosse, field/floor hockey, ultimate Frisbee, flickerball, cricket and team handball. Materials fee required.

KINE 1123. BEGINNING ROCK CLIMBING
The study and practice of the technical and educational skills necessary to safely conduct rock climbing and climbing associated activities. Materials fee required.

KINE 1124. BEGINNING JAZZ DANCE
An examination of the basic steps (skills), movements, dance combinations and instructional practices that pertain to jazz dance. This course will also include multi-cultural application, history and choreography of jazz dance. Materials fee required.

KINE 1131. YOGA
Instruction and practice of Yoga postures, breathing, meditation and relaxation. May be repeated once for credit by non-Kinesiology majors. Materials fee required.

KINE 1132. FITNESS WALKING
Instruction and practice of fitness walking. May be repeated once for credit by non-Kinesiology majors. Materials fee required.

KINE 1133. TAI CHI

KINE 1134. BEGINNING SURFING
This course is designed to provide student with the skills and knowledge necessary to safely enjoy surfing activities. Through structured classroom lectures (including videos) and laboratory activities (beach program), the student will be introduced to the history of surfing, proper use of equipment, skill techniques of surfing, and environmental factors and issues specific to this sport. Materials fee required.

KINE 1151 (PHED 1151). SCUBA AND SNORKELING
Knowledge and techniques of snorkeling and scuba diving. Instruction will be directed toward obtaining a basic open water diver certification. May be repeated once for credit by non-Kinesiology majors. Materials fee required.

KINE 1160. INTRODUCTION TO ATHLETIC TRAINING
This course provides general knowledge of the athletic training profession, epidemiology of athletic injuries, the pre-participation physical exam, strength and conditioning of athletes, environmental concerns, protective equipment, emergency management of athletic injuries and sports nutrition. Materials fee required.

KINE 2107. INTERMEDIATE KARATE
Instruction and practice in intermediate karate form and exercises. Solo and partner practice. Instruction and practice of contemporary techniques of karate. Prerequisite: KINE 1107 or permission by instructor. May be repeated once for credit by non-Kinesiology majors. Materials fee required.

KINE 2134. ADVANCED TAI CHI
Instruction and practice in advanced Taijiquan form and exercises. Solo and partner practice. Prerequisite: KINE 1133 or permission by instructor. May be repeated once for credit by non-Kinesiology majors. Materials fee required.
Course Descriptions

KINE 2135. INTERMEDIATE SURFING 1 sem. hr.
This course is designed to provide students with the skills and knowledge necessary to safely enjoy intermediate surfing activities. Through structured classroom lectures (including videos) and beach laboratories the student will be introduced to: proper use of equipment, surfing history, environmental issues and the 'Goals To Success In Surfing'. Prerequisite: KINE 1134 or instructor-approved demonstration of basic surfing skills. Materials fee required.

KINE 2191. CLINICAL EXPERIENCE IN ATHLETIC TRAINING I 1 sem. hr.
A field based professional experience to provide the student the opportunity to apply knowledge and theory related to the philosophy, principles, and competencies of the athletic training profession. Prerequisites: Admission to the athletic training program and concurrent enrollment in KINE 1320. Materials fee required.

KINE 2192. CLINICAL EXPERIENCE IN ATHLETIC TRAINING II 1 sem. hr.
A field based professional experience to provide the student the opportunity to apply knowledge and theory related to the philosophy, principles, and competencies of the athletic training profession. Prerequisites: Admission to the athletic training program and concurrent enrollment in KINE 3318. Materials fee required.

KINE 2214. COACHING OF VOLLEYBALL 2 sem. hrs.
Instruction and practice of techniques, skills, and instructional strategies involved in volleyball. Additional information will cover skill development strategies, class/group management, risk management, budget, fund raising and public/family relations. Materials fee required.

KINE 2215 (PHED 1206). FIRST AID AND SAFETY 2 sem. hrs.
Basic CPR and first aid instruction leading to American Red Cross certification. Materials fee required.

KINE 2216. COACHING OF SOCCER 2 sem hrs.
Instruction and practice of techniques, skills, and instructional strategies involved in soccer. Additional information will cover skill development strategies, class/group management, risk management, budget, fund raising and public/family relations. Material fees required.

KINE 2217. COACHING OF BASKETBALL 2 sem. hrs.
Instruction and practice of techniques, skills, and instructional strategies involved in basketball. Additional information will cover skill development strategies, class/group management, risk management, budget, fund raising and public/family relations. Materials fee required.

KINE 2218. COACHING OF SOFTBALL 2 sem. hrs.
Instruction and practice of techniques, skills, and instructional strategies involved in softball. Additional information will cover skill development strategies, class/group management, risk management, budget, fund raising and public/family relations. Materials fee required.

KINE 2219. COACHING OF BASEBALL 2 sem. hrs.
Instruction and practice of techniques, skills, and instructional strategies involved in baseball. Additional information will cover skill development strategies, class/group management, risk management, budget, fund raising and public/family relations. Materials fee required.

KINE 2220. COACHING OF FOOTBALL 2 sem. hrs.
Instruction and practice of techniques, skills, and instructional strategies involved in football. Additional information will cover skill development strategies, class/group management, risk management, budget, fund raising and public/family relations. Materials fee required.

KINE 2221. COACHING OF TRACK AND FIELD 2 sem. hrs.
Instruction and practice of techniques, skills, and instructional strategies involved in track and field. Additional information will cover skill development strategies, class/group management, risk management, budget, fund raising and public/family relations. Materials fee required.

KINE 2225. SPORTS CONDITIONING 2 sem. hrs.
This course is designed to provide theoretical knowledge and practical skills in preparation for a national certification exam in personal training. Topics will include athletic needs evaluation, exercise programming, and program implementation. Issues regarding resistance exercise, speed, endurance, explosiveness training, and agility will be addressed. Materials fee required.

KINE 2226. PERSONAL TRAINING INSTRUCTION 2 sem. hrs.
This course is designed to provide theoretical knowledge and practical skills in preparation for a national certification exam in group-fitness instruction. Topics include guidelines for instructing safe, effective, and purposeful exercise, essentials of the client-trainer relationship, conducting health and fitness assessments, and designing and implementing appropriate exercise programming. A national personal training certification is offered at the end of the course.

KINE 2227. GROUP FITNESS INSTRUCTOR TRAINING CERTIFICATION 2 sem. hrs.
This course is designed to provide theoretical knowledge and practical skills in preparation for a national certification exam in group-fitness instruction. Topics include guidelines for instructing safe, effective, and purposeful exercise, essentials of the instructor-participant relationship, the principles of motivation to encourage adherence in the group fitness setting, effective instructor-to-participant communication techniques, methods for enhancing group leadership, and the group fitness instructor’s professional role. A national group fitness instructor certification is offered at the end of the course.

KINE 2255 (PHED 2255). WATER SAFETY INSTRUCTION 2 sem. hrs.
Skills and techniques of aquatic rescues and swimming programs. May be repeated once for credit by non-Kinesiology majors. Materials fee required.

KINE 2313 (PHED 1301). FOUNDATIONS OF KINESIOLOGY 3 sem. hrs.
An overview of the field of physical education which includes the history, philosophy, principles, current
concepts of physical education and career options. For kinesiology majors this course must be taken prior to any senior level (4000) kinesiology courses.

KINE 2314. 3 sem. hrs.  
SPORT MANAGEMENT  
The study of operating principles for programs in intercollegiate athletics, professional sports, recreational sports, and community sports associations.

KINE 2315. 3 sem. hrs.  
CPR AND FIRST AID FOR THE PROFESSIONAL RESCUE  
This course provides the skills needed by professional rescuers to respond appropriately to breathing, cardiac, and other first aid emergencies. This includes the use of automated external defibrillation (AED), oxygen, suctioning, and airway management devices to care for a victim of breathing or cardiac emergencies. Materials fee required.

KINE 2316. 3 sem. hrs.  
HEALTH AND FITNESS  
An overview of relevant health and fitness topics including mental and physical health, nutrition, human sexuality, communicable and non-communicable diseases, use and abuse of drugs/alcohol and safety. This course will include two hours of lecture and one hour of activity each week. Materials fee required.

KINE 2325. 3 sem. hrs.  
PHYSIOLOGICAL ASPECTS OF KINESIOLOGY  
An introduction to the fundamental principles of human physiology and their application to kinesiology.

KINE 2335. 3 sem. hrs.  
LIFEGUARD TRAINING  
This course provides instruction in first aid, CPR for professional rescuers, Automated External Defibrillator (AED) training, water safety and rescue skills. Materials fee required.

KINE 2337. 3 sem. hrs.  
PREVENTION AND CARE OF ATHLETIC INJURIES  
Provides the general knowledge and general application of theory, principles, and skills used in the prevention, care, and rehabilitation of athletic injuries. Materials fee required.

KINE 2338. 3 sem. hrs.  
PSYCHOLOGY OF SPORT  
The study of operating principles for programs in intercollegiate athletics, professional sports, recreational sports, and community sports associations.

KINE 2339. 3 sem. hrs.  
OUTDOOR ADVENTURE PROGRAMS  
An introduction to a variety of outdoor adventure activities and basic outdoor skills. In addition to skill acquisition and assessment, this course covers such topics as: history and philosophy of outdoor adventure programs, risk and legal liability and trip planning. Materials fee required.

KINE 2344. 2 sem. hrs.  
RHYTHMIC AND DANCE ACTIVITIES  
Instruction and practice in creative and structured dance as applied to elementary and secondary school programs.

KINE 2350. 3 sem. hrs.  
PROMOTION OF SPORT  
This course is designed to provide the sport manager with an understanding of the main marketing issues within the sport industry. Special emphasis is placed on the application and assessment of marketing sport within the private and public sectors. Prerequisite: KINE 2314.

KINE 2352. 3 sem. hrs.  
PHYSICAL EDUCATION ACTIVITIES  
Application of principles of physical activities, games and sports. Materials fee required.

KINE 2355. 3 sem. hrs.  
LIFEGUARD TRAINING  
This course provides instruction in first aid, CPR for professional rescuers, Automated External Defibrillator (AED) training, water safety and rescue skills. Materials fee required.

KINE 2357. 3 sem. hrs.  
SPORT OFFICIATING  
Designed to provide an understanding of the foundations of officiating for sport, and the effective organization, training, and supervision of officials for sport programs.

KINE 2359. 3 sem. hrs.  
NUTRITION FOR HUMAN PERFORMANCE  
This course is an introduction to the physiological, anatomical, and psychological aspects of nutrition in relation to human performance and optimal health. Special emphasis is placed on sport and fitness enhancement and achievement of peak training levels, through proper nutrient ingestion.

KINE 2360. 3 sem. hrs.  
PROMOTION OF SPORT  
This course is designed to provide the sport manager with an understanding of the main marketing issues within the sport industry. Special emphasis is placed on the application and assessment of marketing sport within the private and public sectors. Prerequisite: KINE 2314.

KINE 2362. 3 sem. hrs.  
OUTDOOR ADVENTURE PROGRAMS  
An introduction to a variety of outdoor adventure activities and basic outdoor skills. In addition to skill acquisition and assessment, this course covers such topics as: history and philosophy of outdoor adventure programs, risk and legal liability and trip planning. Materials fee required.

KINE 2364. 2 sem. hrs.  
RHYTHMIC AND DANCE ACTIVITIES  
Instruction and practice in creative and structured dance as applied to elementary and secondary school programs.

KINE 2366. 3 sem. hrs.  
PROMOTION OF SPORT  
This course is designed to provide the sport manager with an understanding of the main marketing issues within the sport industry. Special emphasis is placed on the application and assessment of marketing sport within the private and public sectors. Prerequisite: KINE 2314.

KINE 2369. 3 sem. hrs.  
PHYSICAL EDUCATION ACTIVITIES  
Application of principles of physical activities, games and sports. Materials fee required.

KINE 2371. 3 sem. hrs.  
OUTDOOR ADVENTURE PROGRAMS  
An introduction to a variety of outdoor adventure activities and basic outdoor skills. In addition to skill acquisition and assessment, this course covers such topics as: history and philosophy of outdoor adventure programs, risk and legal liability and trip planning. Materials fee required.

KINE 2373. 3 sem. hrs.  
PROMOTION OF SPORT  
This course is designed to provide the sport manager with an understanding of the main marketing issues within the sport industry. Special emphasis is placed on the application and assessment of marketing sport within the private and public sectors. Prerequisite: KINE 2314.

KINE 2375. 3 sem. hrs.  
NUTRITION FOR HUMAN PERFORMANCE  
This course is an introduction to the physiological, anatomical, and psychological aspects of nutrition in relation to human performance and optimal health. Special emphasis is placed on sport and fitness enhancement and achievement of peak training levels, through proper nutrient ingestion.

KINE 2377. 3 sem. hrs.  
PROMOTION OF SPORT  
This course is designed to provide the sport manager with an understanding of the main marketing issues within the sport industry. Special emphasis is placed on the application and assessment of marketing sport within the private and public sectors. Prerequisite: KINE 2314.

KINE 2379. 3 sem. hrs.  
PHYSICAL EDUCATION ACTIVITIES  
Application of principles of physical activities, games and sports. Materials fee required.
performance in sport, exercise, and other types of physical activity with emphasis on motivational techniques, personality dynamics, and mental health serving as focal points.

**KINE 3338.** 3 sem. hrs.
**MOTOR DEVELOPMENT/MOTOR LEARNING**
A study of the fundamental principles related to human motor development and the scientific principles related to motor learning. Materials fee required.

**KINE 3339.** 3 sem. hrs.
**ELEMENTARY PHYSICAL EDUCATION PROGRAMS**
The application of the fundamental principles related to human motor development, physical fitness, locomotor skills, non-locomotor skills, manipulative skills, and rhythmic activities with children at the elementary school level. Prerequisite: KINE 3338. Materials fee required.

**KINE 3341.** 3 sem. hrs.
**SECONDARY PHYSICAL EDUCATION PROGRAMS**
The application of the fundamental principles related to human motor development, physical fitness, sports related activities and dance with children at the secondary school level. Prerequisite: KINE 3338. Materials fee required.

**KINE 3365.** 3 sem. hrs.
**PERSONNEL MANAGEMENT IN SPORT**
A study of human dynamics and behavior in the workplace of sport agencies. Prerequisite: KINE 2314.

**KINE 3366.** 3 sem. hrs.
**MANAGING LEISURE SERVICES**
Introduction of issues related to managing leisure services in a variety of settings such as universities, municipal recreation, corporate wellness centers, and government and private sectors. Prerequisite: KINE 2314.

**KINE 4112.** 1 sem. hr.
**PHYSIOLOGY OF EXERCISE LAB**
The required laboratory course with KINE 4312. Demonstration and hands-on learning will introduce students to the scientific basis, techniques, and methods used in exercise physiology. Lab activities will complement lecture materials from KINE 4312. Lab fee required. KINE 4112 must be taken concurrently with KINE 4312. Prerequisite: BIOL 2401.

**KINE 4127.** 1 sem. hr.
**BIOMECHANICS LAB**
The required laboratory course with KINE 4327. The demonstration and application of mechanical factors and principles affecting human motion. Qualitative and quantitative analysis of human motion with emphasis on sport and fitness activities. Lab fee required. KINE 4127 must be taken concurrently with KINE 4327. Prerequisites: BIOL 2401 and KINE 4325.

**KINE 4191.** 1 sem. hr.
**CLINICAL EXPERIENCE IN ATHLETIC TRAINING V**
A field based professional experience to provide the student the opportunity to apply knowledge and theory related to the philosophy, principles, and competencies of the athletic training profession. Prerequisites: Admission to the athletic training program and concurrent enrollment in KINE 3322. Materials fee required.

**KINE 4192.** 1 sem. hr.
**CLINICAL EXPERIENCE IN ATHLETIC TRAINING VI**
A field based professional experience to provide the student the opportunity to apply knowledge and theory related to the philosophy, principles, and competencies of the athletic training profession. Prerequisites: Admission to the athletic training program and concurrent enrollment in KINE 4322. Materials fee required.

**KINE 4193.** 1 sem. hr.
**CLINICAL EXPERIENCE IN ATHLETIC TRAINING VII**
A field based professional experience to provide the student the opportunity to apply knowledge and theory related to the philosophy, principles, and competencies of the athletic training profession. Prerequisites: Admission to the athletic training program and concurrent enrollment in KINE 4326. Materials fee required.

**KINE 4194.** 1 sem. hr.
**CLINICAL EXPERIENCE IN ATHLETIC TRAINING VIII**
A field based professional experience to provide the student the opportunity to apply knowledge and theory related to the philosophy, principles, and competencies of the athletic training profession. Prerequisites: Admission to the athletic training program and concurrent enrollment in KINE 4324. Materials fee required.

**KINE 4308.** 3 sem. hrs.
**FACILITIES DESIGN AND PLANNING**
Introduction to the process of developing a variety of facilities found in public and private sport settings. Prerequisite: KINE 2314.

**KINE 4310.** 3 sem. hrs.
**PROGRAMS IN SPORTS AND PHYSICAL FITNESS**
A study of the principles of physical fitness and biomechanics of sports with an emphasis upon student performance in a variety of sport activities. Prerequisite: KINE 2313. Materials fee required.

**KINE 4311.** 3 sem. hrs.
**MEASUREMENT AND EVALUATION**
Use and function of the various tests used in kinesiology together with the purpose, scope and techniques of test construction. Development of statistical techniques necessary for manipulation and interpretation of physical performance data. Prerequisites: KINE 1320 or KINE 2313.

**KINE 4312.** 3 sem. hrs.
**PHYSIOLOGY OF EXERCISE**
This course is an application of anatomy and physiology that allows for the understanding of the effects of various forms of exercise and the environment on the body systems and performance. Lab activities will complement lecture materials. Prerequisites: BIOL 2401 and KINE 1320 or KINE 2313. KINE 4112 must be taken concurrently with KINE 4312.

**KINE 4322.** 3 sem. hrs.
**REHABILITATION OF ATHLETIC INJURIES**
Rehabilitation for athletic injuries including goniometry, muscle testing, therapeutic exercises, and the use of SOAP notes. Prerequisite: KINE 3318 and KINE 2325 or BIOL 2401.
KINE 4324. 3 sem. hrs.
ADMINISTRATION OF ATHLETIC TRAINING
Provides the general knowledge and application of athletic training administration including facility design, insur-
ance claims, liability issues, and injury and treatment records. Prerequisite: KINE 1320.

KINE 4325. 3 sem. hrs.
KINESIOLOGY
An analysis of the skeletal, muscular, and neurological structure and functional aspects of human movement with emphasis on sport and fitness activities. Prerequisites: BIOL 2401 and KINE 1320 or KINE 2313.

KINE 4326. 3 sem. hrs.
MEDICAL TERMINOLOGY AND CONDITIONS IN SPORT AND EXERCISE
Provides information about team physician and athletic trainer relationships, physical examinations, emergency equipment, medical terminology, athletic injuries, and problems related to the team physician. Prerequisite: KINE 3318.

KINE 4327. 3 sem. hrs.
BIOMECHANICS
An analysis of the mechanical factors and principles influencing human motion with emphasis on sport and fitness activities. Prerequisites: BIOL 2401, KINE 1320 or KINE 2313, and KINE 4325. KINE 4327 must be taken concurrently with KINE 4127.

KINE 4328. 3 sem. hrs.
SPORT AND EXERCISE PHARMACOLOGY
Provides general knowledge of the classifications, legal concerns, therapeutic uses, actions, side effects, and adverse reactions of major drug groups related to sports activities.

KINE 4339. 3 sem. hrs.
SPECIAL POPULATIONS IN KINESIOLOGY
A course designed to direct kinesiology educators toward meeting the program needs of the exceptional individual in physical education or kinesiology professional setting. Practical teaching application with exceptional individuals is stressed. Prerequisites: KINE 1320 or KINE 2313. Materials fee required.

KINE 4340. 3 sem. hrs.
EXERCISE TESTING AND PRESCRIPTION
This course provides classroom and hands on experience addressing all facets of exercise testing and prescription ranging from health appraisal, physical fitness testing, principles of exercise prescription, clinical exercise physiology, and special populations. Prerequisites: KINE 1320 or KINE 2313, KINE 4312 and BIOL 2401. Materials fee required.

KINE 4363. 3 sem. hrs.
SPORT PROGRAMMING
Designed to provide initial foundation of basic sport programming skills, methods, and techniques necessary to deliver sports activities within a variety of settings, agencies and/or organizations. Prerequisite: KINE 2314.

KINE 4390. 1 3 sem. hrs.
SEMINAR IN EXERCISE AND SPORT
Contemporary issues in Exercise and Sport; topics vary with the individual. May be repeated for credit when topic varies.

KINE 4693. 6 sem hrs.
PROFESSIONAL FIELD EXPERIENCE I
This course is a field-based experience (minimum of 250 hours) to provide the student the opportunity to apply knowledge and theory related to the student’s specialization in kinesiology (e.g. Exercise Science, Sports Management). Students must enroll in both KINE 4693 and KINE 4694 at the same time. To enroll students must have departmental approval as well as an overall and kinesiology GPA of 2.5. The field experience is for seniors only and they should enroll during their last semester. Students should not be enrolled in any other coursework during the internship.

KINE 4694. 6 sem hrs.
PROFESSIONAL FIELD EXPERIENCE II
This course is the continuation of Professional Field Experience I. A minimum of 250 hours is required for this portion of the internship for a total of 500 hours. Students must enroll in both KINE 4693 and KINE 4694 at the same time. All of the requisites and limitations of KINE 4693 apply to this course as well.

KINE 4696. 1 6 sem hrs.
DIRECTED INDIVIDUAL STUDY
Investigative study on selected problems by students with particular needs through special permission of the Department Chair and Dean. May be repeated for credit when topic varies.

MANAGEMENT (MGMT) ____________

MGMT 3312. 3 sem. hrs.
BEHAVIOR IN ORGANIZATIONS
Interactions of individuals and groups in work environments. Topics include decision making, motivation, leadership, power, conflict, stress, and diversity. Other coverage includes management functions and environmental constraints affecting managerial practice and decisions. Prerequisite: BUSI 0011 and Junior standing or above.

MGMT 3315. 3 sem. hrs.
COMMUNICATING IN BUSINESS
A study of the fundamentals of effective communication in business and administration. Emphasis is placed on the application of modern techniques to business writing, including memos, letters and reports, and oral reporting. Prerequisites: BUSI 0011, MISY 2305 and Junior standing or above.

MGMT 3320. 3 sem. hrs.
CONCEPTS OF HUMAN RESOURCE MANAGEMENT
A study of the comprehensive set of managerial activities carried out in organizations to develop and maintain a qualified workforce. Topics include the legal environment, human resource planning, recruitment, selection, employee appraisal, compensation systems, and an introduction to labor relations. Prerequisite: MGMT 3312 and Junior standing or above.

MGMT 3325. 3 sem. hrs.
INTRODUCTION TO QUALITY MANAGEMENT
The contributions of the masters in quality management are examined. Applications of concepts in manufacturing and service organizations are presented. The class is managed by utilizing these concepts. Prerequisite: Junior standing or above.

MGMT 3355. 3 sem. hrs.
ORGANIZATION CHANGE AND DEVELOPMENT
An in-depth study of group and organization-wide interventions designed to improve the group and
organization’s ability to cope with change and manage continuous improvement. Emphasis is on developing processes to improve group dynamics, organization-wide health and effectiveness, and on a systems approach to diagnosing and solving problems. Prerequisites: MGMT 3312 and Junior standing or above.

**MGMT 3390.** **3 sem. hrs.**
**TRAINING, DEVELOPMENT AND CAREER PLANNING**
A study of the concepts and methods appropriate to the functions of training, career development, and career planning. Students will learn self-assessment skills, job search techniques, and will apply these learned skills and concepts to the design of a training program and the development of a career plan. Prerequisites: MGMT 3320 and Junior standing or above.

**MGMT 4305.** **3 sem. hrs.**
**STAFFING AND DEVELOPMENT**
A study of the concepts, methods, and problems encountered in the development, validation, and utilization of employee recruitment, selection, training, and career development. Legal defensibility, and organizational effectiveness of staffing and development will be discussed. Prerequisites: ORMS 3310, MGMT 3320, or permission of instructor if taken as an elective, and Junior standing or above.

**MGMT 4310.** **3 sem. hrs.**
**MANAGING DYSFUNCTIONAL WORKPLACE BEHAVIOR**
This course focuses on conceptual content and skills that today’s managers can use to improve the workplace environment and management of subordinate performance. More specifically, the course focuses on the causes, consequences and management of many difficult employee behaviors including aggression, violence, sexual harassment, sabotage, and theft. The material is based upon previous coursework and extends student understanding of important topics including motivation, discipline, leadership, group behavior, and performance management. Prerequisites: MGMT 3312, 3320 and Junior standing or above.

**MGMT 4315.** **3 sem. hrs.**
**MULTINATIONAL MANAGEMENT**
A study of management processes and their application across different cultural, economic and legal environments. The course focuses on differences among values, beliefs, perceptions, attitudes and behaviors across national and cultural boundaries that affect the employee work and performance. Prerequisites: MGMT 3312, 3320, or permission of instructor if taken as an elective, and Junior standing or above.

**MGMT 4320.** **3 sem. hrs.**
**LEADERSHIP AND MANAGERIAL EFFECTIVENESS**
A chronological study of leadership models, styles, and practices highlighting the paradigm shift from the industrial age to the information age. Focuses on the characteristics of leaders important to effective leadership outcomes, cross-cultural skills essential for effective leadership in international and culturally diverse settings, self-assessment and the development of a personal leadership vision, and the strategic skills necessary for providing vision and strategic direction of the organization. Prerequisites: MGMT 3312, 3320, 3355, or permission of instructor if taken as an elective, and Junior standing or above.

**MGMT 4330.** **3 sem. hrs.**
**BUSINESS ETHICS**
Historical and contemporary views of business as a social institution; focus is on the nature of ethics and the utilization of codes of ethics. Prerequisite: Junior standing or above.

**MGMT 4335.** **3 sem. hrs.**
**COMPENSATION AND APPRAISAL SYSTEMS**
A study of the issues involved in planning, processing and administering employee compensation programs and performance appraisal systems. Topics include incentive pay, executive compensation, fringe benefits, health and pension plans, methods of performance appraisal and use of appraisals in compensation decisions. Prerequisites: MGMT 3320, or permission of instructor if taken as an elective, and Junior standing or above.

**MGMT 4340.** **3 sem. hrs.**
**CRITICAL THINKING AND DECISION MAKING**
This course integrates theory and practice in order to develop and accumulate problem solving skills--the ability to analyze, think, perform, evaluate, and adapt to the changing needs of organizations. Focuses on complex decision making processes, critical thinking skills and creative problem solving techniques for the learning organization, motivation and coaching of others, development of conflict resolution skills, and the management of stress and well-being. Prerequisites: MGMT 3312, 3320, 3355, 4320, or permission of instructor if taken as an elective, and Junior standing or above.

**MGMT 4385.** **3 sem. hrs.**
**HUMAN RESOURCE PLANNING**
A study of the concepts important to human resource planning; both strategic planning and budgetary planning will be discussed. The course will focus on developing skills necessary to estimate and evaluate the costs of various human resource activities, and on decision-making activities in a human resource management environment. Prerequisites: MGMT 3320, or permission of instructor if taken as an elective, and Junior standing or above.

**MGMT 4388.** **3 sem. hrs.**
**ADMINISTRATIVE POLICY AND STRATEGY**
Analytical process and methodology for policy-strategy formulation, approached as a multi-level, integrative process. Analysis focused on integration of skills and competencies acquired through the BBA program. Open only to business majors who are in their last semester or within 12 hours of graduation and have completed all other courses in the Business Core.

**MGMT 4390.** **1-3 sem. hrs.**
**CURRENT TOPICS IN MANAGEMENT**
Selected topics for special study related to management functions, processes or issues. May be repeated for credit when topics vary. Prerequisites: Junior standing or above, and others depending on topic. Contact the Dean’s office for information.

**MGMT 4396.** **1-3 sem. hrs.**
**DIRECTED INDIVIDUAL STUDY**
Individual supervised study and a final report. Prerequisites: permission of instructor, Junior standing or above, and others depending on selected topic. Inquire at the Dean’s office for information.
MGMT 4398. 3 sem. hrs.
INTERNSHIP IN MANAGEMENT
Supervised full-time or part-time, off-campus training in business or government organization. Oral and written reports required. Prerequisites: management major, and Junior standing or above. Students must apply to program and be accepted prior to registration. May not be repeated for credit.

MANAGEMENT INFORMATION SYSTEMS (MISY)
MISY 2305 (BCIS 1305) 3 sem. hrs.
COMPUTER APPLICATIONS IN BUSINESS
Survey of modern business computer hardware, software, and applications. Opportunities to create programs and use existing application software to solve various management information technology-oriented problems. Emphasizes the end-user’s perspective, and interactions with management information technology. Satisfies university computer literacy requirement.

MISY 3310. 3 sem. hrs.
MANAGEMENT INFORMATION SYSTEMS CONCEPTS
Provides an understanding of the importance of computer-based information in the success of the firm. Illustrates ways in which companies utilize computer systems to strategically compete within certain industries. Emphasis is on the role of information systems within each of the functional areas of business. Major concepts include data management, decision support, and management information systems. Prerequisites: BUSI 0011, MISY 2305 and Junior standing or above.

MISY 3320. 3 sem. hrs.
BUSINESS DATA COMMUNICATION SYSTEMS I
Characteristics of contemporary business data communication components, their configurations, and their impact on management information systems design. Topics include designing, managing, securing, and implementing business data communication networks, and their integration into management information systems. Exercises and assignments use various data communication facilities. Prerequisites: MISY 3310 and Junior standing or above.

MISY 3330. 3 sem. hrs.
DATA BASE MANAGEMENT
Concepts and methodology of data base planning, design, development, and management of the computerized data base of a management information system. The emphasis is on logical data base design and a study of hierarchical, network, and relational implementations. Normalization exercises are completed relative to the logical design of relational data bases. Exercises and assignments use a relational DBMS package. Prerequisites: MISY 2305, COCS 1435 and Junior standing or above.

MISY 3340. 3 sem. hrs.
SYSTEMS ANALYSIS AND DESIGN
Develops ability to analyze an existing information system within an organization, to identify information requirements, and to specify the functions of a new information system. Includes cost/benefit analysis of proposed information systems. Exercises and assignments use a Computer Aided Software Engineering (CASE) tool. Prerequisites: MISY 3330 and Junior standing or above.

MISY 3350. 3 sem. hrs.
BUSINESS APPLICATIONS DEVELOPMENT
This course provides an understanding of the Visual Basic programming environment in the context of business application design and development. This course will place emphasis on performance characteristics and user interface design considerations. Prerequisites: MISY 3310 or equivalents and Junior standing or above.

MISY 4310. 3 sem. hrs.
BUSINESS DATA COMMUNICATIONS SYSTEMS II
Design, implementation, and operation of client-server network systems for organizational Intranets and Internet presence. Exercises and assignments use selected data communications facilities. Prerequisites: MISY 3320 and Junior standing or above.

MISY 4325. 3 sem. hrs.
BUSINESS DECISION SUPPORT SYSTEMS AND EXPERT SYSTEMS
A survey of decision support systems and expert systems used in business. Topics include artificial intelligence (AI), knowledge engineering, knowledge acquisition, expert system shells, modeling, simulation, and selection of appropriate computer package support. Exercises and assignments use various computer packages such as neural network systems and expert system shells. Prerequisites: MISY 3310, MISY 3330 and Junior standing or above.

MISY 4330. 3 sem. hrs.
WEBSITE DEVELOPMENT FOR BUSINESS
This course provides an understanding of the principles and techniques for client-side web development using HTML, XHTML and CSS. Text editors and the software tools such as Dreamweaver and FrontPage will be used. This course includes designing for web standard, accessibility, usability, and workflow for web design. Prerequisites: MISY 3330 or equivalent and Junior standing or above.

MISY 4340. 3 sem. hrs.
ELECTRONIC COMMERCE MANAGEMENT
A broad overview of electronic commerce topics as they relate to various users. General coverage includes electronic commerce history, opportunities, limitations, and risks. Technical discussions include the internet, intranets, extranets, firewalls, security, protocols, servers, and browsers. Prerequisites: MISY 3310 and Junior standing or above.

MISY 4390. 1-3 sem. hrs.
CURRENT TOPICS IN MANAGEMENT INFORMATION SYSTEMS
Selected topics for special study related to management information systems. Prerequisites: Junior standing or above, and others depending on topic. Contact the Dean’s office for information.

MISY 4396. 1-3 sem. hrs.
DIRECTED INDIVIDUAL STUDY
Individual supervised study and a final report. Prerequisites: permission of instructor, Junior standing or above, and others depending on selected topic. Inquire at the Dean’s office for information.
MISY 4398. INTERNSHIP IN MANAGEMENT INFORMATION SYSTEMS
Supervised practical experience in business computer systems. Prerequisites: MIS major, Junior standing or above, and others depending on selected internship. Students must be accepted prior to registration. May not be repeated for credit.

**MARKETING (MKTG)**

MKTG 3310. PRINCIPLES OF MARKETING
The initial course in Marketing. Description and analysis of the flow of goods, services and ideas to consumers and industrial users. Factors outside the firm are also considered as they affect marketing decisions. Prerequisite: BUSI 0011 and Junior standing or above.

MKTG 3311. SALESMANSHIP: CONCEPTS AND PRACTICES
An introduction to professional salesmanship as a marketing tool. Emphasis is placed on the theory and application of the professional selling process. Prerequisite: Junior standing or above.

MKTG 3315. PROMOTIONAL STRATEGY
The development and implementation of a coordinated and integrated promotional program. Emphasis is placed on the interrelationships among advertising, sales management, and sales promotion activities. Prerequisites: MKTG 3310 and Junior standing or above.

MKTG 3320. BASIC ADVERTISING
Advertising concepts and a critical analysis of commercial advertising practices. Students apply advertising concepts in projects such as case studies, campaign evaluations, and simulation exercises. Prerequisite: Junior standing or above.

MKTG 3325. GUERRILLA MARKETING
Guerrilla marketing, as originally created by Jay Conrad Levinson, is an unconventional way of performing marketing activities (primarily promotion) on a very low budget. Students will learn the utilization and analysis of the small entrepreneurial organization, its products and services, the development of specific yet flexible marketing plans and activities, and the creation of practices, finances, and obligations associated with the marketing of smaller entrepreneurial firms. Factors inside and outside the firm are researched and analyzed as they affect successful guerrilla marketing decisions. Prerequisites: MKTG 3310, Junior standing or above and/or permission of the instructor for non-business majors.

MKTG 3330. CONSUMER BEHAVIOR
An examination of the psychological and social influences that affect consumer decision making. Emphasizes the development of marketing programs designed with behavioral considerations in mind. Prerequisites: MKTG 3310 and Junior standing or above.

MKTG 3340. RETAIL MANAGEMENT
A managerial approach to retailing. Topics such as trade area evaluation, buying, layout, pricing, cost and expense analysis are considered. Prerequisites: MKTG 3310 and Junior standing or above.

MKTG 3345. SALES MANAGEMENT
An exploration of the problems and practices of sales and sales management. Organizational structure and development of programs to assure a competent and effective sales force are stressed. Prerequisites: MKTG 3310 and Junior standing or above.

MKTG 4310. DISTRIBUTION SYSTEMS IN MARKETING
An analysis of the development of integrated distribution systems. Topics include retail and wholesale institutions, channel conflict and cooperation, channel control, franchising and emerging developments in distribution channels. Prerequisites: MKTG 3310 and Junior standing or above.

MKTG 4320. MARKETING RESEARCH
The study of research in marketing with emphasis on the collection and interpretation of data and its application to the solution of marketing problems. Prerequisites: ORMS 3310, MKTG 3310, 6 hours of advanced marketing, and Junior standing or above.

MKTG 4340. INTERNATIONAL MARKETING
A study of the economic, social, and cultural environment of international marketing. The course focuses on marketing decision making in this environment. Prerequisites: MKTG 3310 and Junior standing or above, or permission of instructor.

MKTG 4350. MARKETING PROBLEMS AND POLICIES
Capstone course in Marketing. The development and implementation of marketing strategy. The development of marketing programs that affect and are affected by the competitive environment. Prerequisites: MKTG 3310, nine additional hours of upper-division marketing, and Senior standing.

MKTG 4390. CURRENT TOPICS IN MARKETING
Selected topics for special study related to marketing functions, processes, or issues. May be repeated for credit when topics vary. Prerequisites: Junior standing or above, and others depending on topic. Contact the Dean’s office for information.

MKTG 4396. DIRECTED INDIVIDUAL STUDY
Individual supervised study and a final report. Prerequisites: permission of instructor, Junior standing or above, and others depending on selected topic. Inquire at the Dean’s office for information.

MKTG 4398. INTERNSHIP IN MARKETING
Supervised full-time or part-time, off-campus training in business or government organization. Oral and written reports required. Prerequisites: marketing major, and Junior standing or above. Students must apply to program and be accepted prior to registration. May not be repeated for credit.
Several courses listed below have associated laboratories. Weekly lecture and laboratory hours associated with each course are designated by (lecture:lab) following the semester hours. We will make every effort to offer courses in the semesters listed below.

**MATH 0099.** 0 sem. hr. (0:0)  
**MATH TUTORIAL BASED DEVELOPMENT**  
Preparation course to help students pass the math portion of the Texas Higher Education Assessment (THEA). Topics include four general areas: fundamental mathematics, algebra, geometry, and problem solving. Coordinated by the Tutoring and Learning Center, this course does not count toward graduation or full-time status. Prerequisites: MATH 0398 and MATH 0399.

**MATH 0398.** 3 sem. hrs. (3:0)  
**INTRODUCTION TO ALGEBRA**  
Number concepts, computation, elementary algebra, geometry, and mathematical reasoning. (Not counted toward graduation.) Fall, Spring, Summer.

**MATH 1324 (MATH 1324) 3 sem. hrs. (3:0)**  
**BUSINESS MATHEMATICS**  
Topics include four general areas: fundamental mathematics, algebra, geometry, and problem solving. Coordinated by the Tutoring and Learning Center, this course does not count toward graduation or full-time status. Prerequisites: MATH 0398 or placement into MATH 0399. Fall, Spring, Summer.

**MATH 1314 (MATH 1314) 3 sem. hrs. (3:0)**  
**COLLEGE ALGEBRA**  
Quadratic equations, inequalities, graphs, logarithms and exponentials, theory of polynomial equations, systems of equations. Counts as the mathematics component of the University Core Curriculum. Prerequisite: MATH 0398 or placement into MATH 1314. Fall, Spring, Summer.

**MATH 1316 (MATH 1316) 3 sem. hrs. (3:0)**  
**TRIGONOMETRY**  
Trigonometric functions, identities, equations involving trigonometric functions, solutions of right and oblique triangles. Prerequisite: MATH 1314 or placement into MATH 1316. Fall, Spring.

**MATH 2312.** Fall, Spring, Summer.

**MATH 1325 (MATH 1325) 3 sem. hrs. (3:0)**  
**BUSINESS CALCULUS**  
This course is designed specifically for students majoring in business. This course shows students how to apply the language of mathematics to business problems, and how to use computers to do mathematics. The course will provide students with communication skills, creative problem solving skills, and the ability to work in teams. The course is centered on two significant business problems and the tools, both mathematical and computer based, that are needed for their solutions. A spreadsheet will be used to assist students with the mathematics and with the presentation of their results. Counts as the mathematics component of the University Core Curriculum. Prerequisite: MATH 1314 or placement beyond MATH 1314.

**MATH 2305 (MATH 2305) 3 sem. hrs. (3:0)**  
**DISCRETE MATHEMATICS I**  
An introduction to discrete mathematics in an emphasis on applications in Mathematics and Computer Science. Topics include formal logic, graphs, trees and related algorithms, and combinatorics and discrete probability. Prerequisites: MATH 1314 and 1316, or MATH 2312, or placement beyond MATH 2312. Fall, Spring, Summer.

**MATH 2312 (MATH 2312) 3 sem. hrs. (3:0)**  
**PRECALCULUS**  
A more rapid treatment of the material in MATH 1314 and MATH 1316, this course is designed for students who wish a review of the above material, or who are very well prepared. Functions, graphs, trigonometry, and analytic geometry. Prerequisite: MATH 1314 or placement into MATH 2312. Fall, Spring, Summer.

**MATH 1390.** 1-3 sem. hrs. (3:0)  
**INTRODUCTION TO MATHEMATICAL TOPICS**  
A course to introduce students to mathematical topics in a formal setting. The course may support problem solving, or systematic investigations of topics outside the current mathematical catalog. May not be substituted for regularly scheduled offerings. May be repeated for credit. Cr/NC. Prerequisite: Permission of the Department Chair.

**MATH 1442 (MATH 1442) 4 sem. hrs. (3:2)**  
**STATISTICS FOR LIFE**  
An introduction to statistical concepts and methods used in all disciplines to enhance decision making based on data analysis, including: basic experimental design models, measurement and data collection through sampling; display and summary of information, and assessment of relationship through descriptive techniques; probability concepts leading to estimation and hypothesis testing of means, variance and proportions, regression analysis, one-factor ANOVA and chi-square test of independence; and applications through case studies. The laboratory component of the course offers applications of the theory presented during the classroom sessions. Counts as the mathematics component of the University Core Curriculum. Prerequisite: MATH 1314 or placement beyond MATH 1314; also non-remedial status in Reading and Writing as determined by placement testing or THEA. Fall, Spring, Summer.

**MATH 1470.** 4 sem. hrs. (3:2)  
**INTRODUCTION TO MODELING**  
A course designed to lead the student to an understanding of how mathematics can be used to model real world systems. Modeling topics include: types of models; identifying relevant variables and potential relationships between them; collecting data; evaluating the fit between model and reality; and explaining the model and its implications to others. Includes a one-hour laboratory component. Mathematical examples are taken from the areas of population, biology, optimization, and game theory. Counts as the mathematics component of the University Core Curriculum. Prerequisite: MATH 0399 or placement beyond MATH 0399; also non-remedial status in Reading and Writing as determined by placement testing or THEA. Fall, Spring, Summer.
MATH 2413 (MATH 2413)  4 sem. hrs. (3:2)
CALCULUS I
Limits, continuity, derivatives, applications of the derivative, and an introduction to integrals. Counts as the mathematics component of the University Core Curriculum. Contains a one-hour laboratory component. Prerequisite: MATH 1314 and 1316, or MATH 2312, or placement beyond MATH 2312. Fall, Spring, Summer.

MATH 2414 (MATH 2414)  4 sem. hrs. (3:2)
CALCULUS II
Integration, applications of integration, especially to differential equations, sequences, series, Taylor polynomials and series. Contains a one-hour laboratory component. Prerequisite: MATH 2413. Fall, Spring, Summer.

MATH 3300.  3 sem. hrs. (3:0)
GEOSPATIAL MATHEMATICAL TECHNIQUES
Characteristics of geographic/spatial information; overview of relevant sections of numbers, algebra and geometry, plane and spherical trigonometry, matrices, determinants and vectors, curves and surfaces, integral and differential calculus, partial derivatives, with an emphasis on geospatial applications. Concepts of geospatial coordinate systems and geospatial coordinate transformations; overview of spatial statistics and best-fit solutions with geospatial applications. Students may not receive credit for both MATH 3300 and GISC 3300. Prerequisite: MATH 2413 and MATH 2414.

MATH 3311.  3 sem. hrs. (2:2)
LINEAR ALGEBRA
Fundamentals of linear algebra and matrix theory. Topics include vectors, matrix operations, linear transformations, fundamental properties of vector spaces, systems of linear equations, eigenvalues and eigenvectors. Applications. Prerequisite: MATH 2413. Fall, Spring, Summer.

MATH 3312.  3 sem. hrs. (2:2)
COLLEGE GEOMETRY
A careful study of the foundations of Euclidean geometry by synthetic methods with an introduction to non-Euclidean geometries. An introduction to transformational geometry. Prerequisite: MATH 2413 and junior standing; MATH 3311 recommended. Fall, Summer.

MATH 3313.  3 sem. hrs. (3:0)
FOUNDATIONS TO HIGHER MATHEMATICS
This course assists a student’s transition from calculus to advanced mathematics. Fundamentals of logic and proof are reviewed and applied to topics from analytic geometry and coordinate systems, complex numbers and elementary number theory. Prerequisite: MATH 2414 and MATH 2305. Fall, Spring.

MATH 3315.  3 sem. hrs. (2:2)
DIFFERENTIAL EQUATIONS
An introduction to both theoretical and applied aspects of ordinary differential equations. Topics include: first order equations, linear second order equations, elementary numerical methods, and the Laplace transform. Prerequisite: MATH 2414. Spring.

MATH 3342.  3 sem. hrs. (3:0)
APPLIED PROBABILITY AND STATISTICS
A calculus based introduction to probability and statistics. Emphasis will be on development of statistical thinking and working with data. Topics include probability theory, descriptive statistics, common distributions, and statistical inference. A statistical software package will be used extensively in the course. Prerequisite: Math 2413. Fall.

MATH 3385.  3 sem. hrs. (3:0)
LINEAR OPTIMIZATION AND DECISIONS
This course introduces the linear programming and optimization problems arising in many applications. Contents include linear programming models with solutions, the simplex method, duality theory and its use for management decision making, dual simplex method and sensitivity analysis. Prerequisite: Math 3311 and Math 2413. Fall.

MATH 3390.  1-3 sem. hrs. (3:0)
PROBLEM SOLVING IN MATHEMATICS
A problem solving course for students who want to participate in math problem solving competitions, train for the actuarial or other professional examinations, work on research aimed at conference presentations, or perform research projects at the junior level that are not at the level of directed independent study material. Prerequisites: A grade of C or better in MATH 2414 and permission of the Department Chair. May not be substituted for regularly scheduled offerings.

MATH 3470.  4 sem. hrs. (3:2)
CALCULUS III
Integration, applications of integration, especially to differential equations, sequences, series, Taylor polynomials and series. Contains a laboratory component. Prerequisite: MATH 2414.

MATH 4301.  3 sem. hrs. (3:0)
INTRODUCTION TO ANALYSIS
An advanced treatment of the foundations of calculus stressing rigorous proofs of theorems. Topics include: elements of propositional and predicate logic, topology of the real numbers, sequences, limits, the derivative, and the Riemann integral. Prerequisites: MATH 3470 and MATH 3313. Fall.

MATH 4306.  3 sem. hrs. (3:0)
MODERN ALGEBRA
Fundamentals of set operations, maps and relations, groups, rings and field theory. Topics include permutations, cosets, homomorphisms and isomorphisms, direct product of groups and rings, integral domains field of quotients, fundamental properties of integers, the ring of integers modulo n, and rings of polynomials. Applications. Prerequisites: MATH 3311 and MATH 3313. Spring.

MATH 4315.  3 sem. hrs. (3:0)
PARTIAL DIFFERENTIAL EQUATIONS
An introduction to partial differential equations emphasizing the wave, diffusion and potential (Laplace) equations. A focus on understanding the physical meaning and mathematical properties of solutions of partial differential equations. Methods include fundamental solutions and transform methods for problems on the line, and separation of variables using orthogonal series for problems in regions with boundary. Additional topics include higher dimensional problems and special topics like Harmonic functions, the maximum principle, Green’s functions etc. Prerequisites: MATH 3315 and MATH 3470. Offered Spring of odd years.

MATH 4321.  3 sem. hrs. (2:2)
APPLIED REGRESSION ANALYSIS
Introduction to the formulation of linear models and the estimation of the parameters of such models, with primary emphasis on least squares. Application of multiple regression and curve fitting and the design of
experiments for fitting regression models. Prerequisites: MATH 1342 or MATH 2342 or the equivalent, or MATH 1470. Offered on sufficient demand.

**MATH 4328. 3 sem. hrs. (3:0)**
**DISCRETE MATHEMATICS II**
A continued study of topics from Discrete Mathematics I with additional topics from discrete mathematics that have strong application to the field of computer science. Additional topics include: recurrence relations, formal languages, and finite-state machines. Prerequisites: MATH 2305, COSC 2437. Spring.

**MATH 4342. 3 sem. hrs. (3:0)**
**INTRODUCTION TO MATHEMATICAL STATISTICS**
A first course in mathematical statistics and is taught from a classical viewpoint. Topics include: Set theory, counting techniques, probability axioms, probability density and distribution functions, common distributions, mathematical expectations, functions of random variables, sampling distributions, estimation, hypothesis testing including the likelihood ratio test and the Neyman Pearson theory, regression and correlation. Prerequisite: MATH 3470 required, MATH 3342 recommended. Spring of odd years.

**MATH 4385. 3 sem. hrs. (3:0)**
**APPLIED MODELING**
Capstone course for mathematics majors. The construction of mathematical models from areas such as economics, refining, biology and mariculture, etc. Where possible, local phenomena will be modeled with the assistance of outside consultants. Prerequisites: MATH 3315, MATH 3342, and completion of at least 90 hours. Spring.

**MATH 4390. 3 sem. hrs. (3:0)**
**SELECTED TOPICS**
Offered on sufficient demand. Prerequisites vary.

**MATH 4696. 1-6 sem. hrs. (3:0)**
**DIRECTED INDEPENDENT STUDY**
See college description. Prerequisite: Permission of the instructor. May not be substituted for regularly scheduled offerings.

**MECHANICAL ENGINEERING (MEEN)**
The numbers of weekly lecture and laboratory hours associated with each course are designated by (lecture:lab) following the semester hours (1 lab hour = 3 contact hours). Additional laboratory work may be required to complete the assignments. All courses involving labs will require appropriate fees.

**MEEN 3310 3 sem hrs (3:0)**
**ENGINEERING ANALYSIS FOR MECHANICAL ENGINEERING**
Applications of fundamentals of linear algebra, vector analysis, numerical methods, computer programming, and probability and statistics into mechanical engineering. Prerequisite: Math 3315.

**MEEN 3312 3 sem hrs (2:3)**
**DYNAMICS AND VIBRATIONS**
Application of Newtonian and energy methods to model dynamic systems (particles and rigid bodies) with ordinary differential equations; solution of models using analytical and numerical approaches; interpreting solutions; linear vibrations. Prerequisite: ENGR 2320, MEEN 3310

**MEEN 3330 3 sem hrs (2:3)**
**SOLID MECHANICS FOR ME**
Stress analysis of deformable bodies and mechanical elements; stress transformation; combined loading; failure modes; material failure theories; fracture and fatigue; deflections and instabilities; thick cylinders; curved beams; design of structural/mechanical members; design processes. Prerequisites: ENGR 2320

**MEEN 3340 3 sem hrs (2:3)**
**SOLID MODELING AND FINITE ELEMENTS**
Use of computer aided design and solid modeling tools in engineering design, and analysis, and manufacturing including: solid modeling, stress, flow, and heat transfer analysis using finite element methods. Prerequisite: MEEN 3310, ENGR 2320, ENGR 3315

**MEEN 3345 3 sem hrs (3:0)**
**HEAT TRANSFER**
Steady and unsteady conduction in one- and two-dimensions; forced convection, internal and external flows; heat exchangers; introduction to radiation; elements of thermal system design. Prerequisite: ENGR 2320, ENGR 3315, Math 3315

**MEEN 4220 2 sem hrs (1:3)**
**ENGINEERING LAB**
Experimentation and analysis of thermal/fluid systems, energy balances, performance measurements of devices and systems, data analysis and correlation, elements of experimental design. Prerequisite: ENGR 3315, MEEN 3345

**MEEN 4320 3 sem hrs (3:0)**
**MACHINE DESIGN**
Design of machine elements under static and fatigue loading; design and application of gearing; force analysis of spur, helical, bevel and worm gears; design of gears for static and fatigue loading; use of keys, pins, and spines to attach gears to shafts. Prerequisite: MEEN 3330

**MEEN 4325 3 sem hrs (2:3)**
**ENERGY CONVERSION**
Installation, design characteristics, operational performance, and maintenance of motors, turbines, pumps and compressors. Introduction to global energy concerns; fossil and nuclear fuels; energy consumption analysis; energy management and conservation techniques. Prerequisite: ENGR 2316

**MEEN 4340 3 sem hrs (3:0)**
**PROJECT MANAGEMENT**
Foundations of engineering economy, cash flow and equivalence, and project justification. Introduction to project management, planning, scheduling, and control, use of project management software, GANTT charts, PERT charts, and critical path. Students prepare proposals, including specifications, timelines, schedule, and budget, for projects to be implemented in MEEN 4370. This course should be taken the semester preceding MEEN 4370. Prerequisite: Senior standing.

**MEEN 4350 3 sem hrs (2:3)**
**CONTROLS, AUTOMATION AND ROBOTICS**
Automation in a manufacturing and assembly setting for ocean and marine environments, material handling systems, remote guided vehicles, automated storage and retrieval systems, computer numerical machine tools, robotics. Prerequisite: MEEN 3312
MEEN 4355  3 sem hrs (2:3)  
MARINE FABRICATION  
Advanced topics in manufacturing and fabrication related to ships and offshore platforms and construction. Prerequisite: ENGR 2322, ENGR 2350  

MEEN 4360  3 sem hrs (3:0)  
THERMAL SYSTEM DESIGN  
Analysis, management and cost, team work, optimal design, and computer simulation of thermal systems and components; Applications in fluid flow and heat transfer, pumps, turbines and heat exchangers. Selected course topics are included as computer programming projects. Prerequisite: MEEN 3345  

MEEN 4365  3 sem hrs (3:0)  
MECHANICAL SYSTEM DESIGN  
Analysis, management and cost, team work, optimal design, and computer simulation of mechanical systems and components; machine elements, and stress analysis. Selected course topics are included as computer programming projects. Prerequisite: MEEN 4320  

MEEN 4370  3 sem hrs (3:0)  
CAPSTONE PROJECTS  
This course allows students to employ the knowledge attained in other courses to implement (including building, testing, and documenting) an approved project, within budget and on schedule. Course requirements include a written report and oral presentations. To be taken in the student’s final long semester before graduation. Prerequisite: MEEN 4340  

MEEN 4380  3 sem hrs (3:0)  
RENEWABLE ENERGY  
Renewable and alternative energy sources and fuels; modern energy conversion devices, such as offshore wind farms, marine current turbines, fuel cells, photovoltaic cells, and micro-power turbines. Cost and environmental analysis of renewable sources. Installation, design characteristics, operational performance, and maintenance of motors, turbines, pumps and compressors. Introduction to global energy concerns; fossil and nuclear fuels; energy consumption analysis; energy management and conservation techniques. Prerequisite: ENGR 2316  

MEEN 4385  3 sem hrs (3:0)  
OFFSHORE ENERGY MANAGEMENT  
Topics related to the design and energy management of ships and offshore platforms will be covered. Such topics may include oil and gas exploration, wind and marine energy systems, and environmental protection.  

MEEN 4390  3 sem hrs (2:3)  
INTRODUCTION TO COMPUTATIONAL FLUID DYNAMICS  
Introduction to numerical, computational, modeling and simulation of thermo-fluid systems. Applications related to ships and offshore platforms and structures will be presented. Prerequisite: MEEN 4220  

MEEN 4395  3 sem hrs (2:3)  
OFFSHORE WATER EXPLORATION & DESALINATION SYSTEMS  
Advanced and future applications of sea floor mapping, under-water acoustics and GIS for fresh water exploration & mining. Renewable energy driven coastal, near-shore, and offshore desalination systems. Prerequisite: MEEN 4220.  

MEEN 4396.  1-3 sem hrs.  
DIRECTED INDEPENDENT STUDY  
Requires a formal proposal of study to be completed in advance of registration, approval of supervising faculty and chairperson. Prerequisites: Vary depending upon area of study. Offered on demand.  

MEEN 4697.  1-6 sem hrs.  
INTERNSHIP  
Supervised off campus training in the industrial workplace. Oral and written report required. Prerequisite: Approval of Mechanical Engineering and Cooperative Education Coordinators prior to enrollment in the course. Offered on demand.  

MEXICAN AMERICAN STUDIES (MXAS)  

MXAS 3301.  3 sem hrs.  
INTRODUCTION TO MEXICAN AMERICAN STUDIES  
An introduction to the area of Chicano Studies including the cultural, historical, and linguistic approaches. This basic course includes the study of major authors, significant historical events, and important linguistic considerations.  

MXAS 3311.  3 sem hrs.  
MEXICAN AMERICAN LITERATURE  
An analysis of Chicano literature. Special emphasis will be given to the new consciousness of the Chicano in the most current literature of the various genres.  

MXAS 4390.  3 sem hrs.  
TOPICS IN MEXICAN AMERICAN STUDIES  
May be repeated when topics vary.  

MILITARY SCIENCE (MSCI)  

MSCI 1170.  1 sem hrs.  
INTRODUCTION TO BASIC MILITARY SCIENCE  
A Basic Military Science course that introduces students to leadership and management principles. The primary emphasis is on personnel management, planning and operations, problem analysis and decision making, and the organization of the United States Army. The student will use small unit tactics as the role model for applying these techniques  

MSCI 1171.  1 sem hrs.  
BASIC MILITARY SCIENCE AND SURVIVAL  
Methods and techniques of survival in various situations; designed to enhance self confidence and physical fitness through active participation in adventure training. Examines basic first-aid procedures, supplemented by training in cardiopulmonary resuscitation.  

MSCI 2370.  3 sem hrs.  
BASIC MILITARY SCIENCE  
Application of leadership principles and basic military skills; provides instruction in fire-team and squad level and examines the organization and role of the United States Army; increased emphasis on advanced land navigation and first-aid techniques; stresses physical fitness and provides adventure training.  

MSCI 2371.  3 sem hrs.  
LEADERSHIP AND MANAGEMENT  
Advanced leadership principles and basic military skills; personnel management and motivational techniques studied through placement of students in leadership
positions in assigned missions; studies the organization of the United States Army through battalion level. Stresses physical fitness and provides adventure training in leadership positions.

MSCI 3303. 3 sem. hrs.
ADVANCED MILITARY SCIENCE I
Methods and techniques of planning, preparing and conducting individual and collective military training. Leadership laboratory may be conducted off campus and additional activities are conducted on weekends. Prerequisite: Approval of Professor of Military Science.

MSCI 3304. 3 sem. hrs.
ADVANCED MILITARY SCIENCE II
The leader’s role in small unit tactics. Offensive and defensive operations. Communications equipment, weapons and other tactical equipment. Leadership laboratory may be conducted off campus on weekends. Prerequisite: Approval of Professor of Military Science.

MSCI 3499. 4 sem hrs.
INTERNSHIP IN MILITARY SCIENCE
Six weeks of total environment training consisting of practical application of leadership and management. Requires attendance and successful completion of Leadership Development and Assessment Camp for up to 6 week period at a US Army installation. Formal instruction in tactics, techniques and skills required for all future officers. Prerequisites: MSCI 3303 and/or MSCI 3304 and full contract status with the U.S. Army. Prerequisite: Approval of Professor of Military Science.

MSCI 4303. 3 sem. hrs.
ADVANCED MILITARY SCIENCE III
Problem definition and analysis, decision-making, planning and organizing, functions of key staff members, interpersonal skills and oral communications. Laboratory activities may be conducted off campus on weekends. Prerequisite: Approval of Professor of Military Science.

MSCI 4304. 3 sem. hrs.
ADVANCED MILITARY SCIENCE IV
Military implications of world political and economic changes as well as changes within American society. Also covered are unit administration, logistics, command and staff functions and the legal basis of the military justice system. Prerequisite: Approval of Professor of Military Science.

MSCI 4305. 3 sem. hr.
ADVANCED PROBLEMS
Military Science special problems course designed for individual study in modern day military structure and policies. Prerequisite: Approval of Professor of Military Science.

MSCI 4696. 1-6 sem. hrs.
DIRECTED INDIVIDUAL STUDY
Programs will be designed for individual cases through special permission of the Department Chair and Dean. May be repeated for credit when the topic varies. Prerequisite: Approval of Professor of Military Science.

MUSIC (MUSI)

Music Performance—Private Studio Instruction
Applied music study for music majors is offered in voice and most instruments, including classical guitar. Specific regulations pertaining to private music study are set forth in the document A&M-CC Music Student Handbook, copies of which are available from the Music Department Chair.

Students in applied music classes are expected to perform from time to time in student recital programs, performance seminars, studio recitals, and in other performance settings. An instructor may set forth additional performance expectations, which then become a requirement for that particular course.

Jury examinations for applied music students are conducted at the end of each semester by faculty committees composed of instructors of voice and the various instrument families. Regulations regarding the specific conduct of the examinations are made by the individual jury panels. The judgements of the faculty members on the jury are available to the instructor for use in grading. The determination of whether a student is ready to advance to the next applied music level is made by the jury. Any of the applied music courses may be repeated for credit if the jury so recommends.

The complete inventory of private studio courses is far too extensive for inclusion in this document. Anyone desiring information beyond the following outline should contact the departmental office for a complete listing of the individual courses and course rotation.

SECONDARY STUDIO 1 sem. hr.
This level of study is designed for music majors seeking instruction in performance areas secondary to their major applied field. Study at this level is open to students whose majors are outside the field of music only under very limited circumstances, and with the prior permission of the Music Department Chair. One half-hour lesson each week.

PRINCIPAL FRESHMAN STUDIO 2 sem. hrs.
The freshman level studio for all students pursuing any of the three music degrees. Normally unavailable to students not majoring in music. One hour of private instruction and a one-hour studio class each week.

PRINCIPAL APPLIED STUDIO 2 sem. hrs.
The appropriate studio level for sophomore through senior students enrolled in either the Bachelor of Arts or the Bachelor of Music with Teacher Certification degree programs. Normally unavailable to students not majoring in music. One hour of private instruction and a one-hour studio class each week.

PRINCIPAL APPLIED STUDIO 3 sem. hrs.
Sequence of studio courses limited to sophomore through senior students enrolled in the Bachelor of Music in Performance degree program. One hour of private instruction and a one-hour studio class each week.
MUSI 3085. 0 sem. hr.
JUNIOR RECITAL
Required for all students presenting a Junior Recital in partial fulfillment of the requirements for the Bachelor of Music in Performance Degree. Specific policies governing the presentation and evaluation of such recitals are given in the document, Preparing and Presenting Degree Recitals, available from the Music Department Chair. Requires concurrent enrollment in an appropriate Principal Studio course. Graded CR/NC.

MUSI 4085. 0 sem. hr.
SENIOR RECITAL
Required for all students presenting a Senior Recital in partial fulfillment of the requirements for any music degree. Specific policies governing the presentation and evaluation of such recitals are given in the document, Preparing and Presenting Degree Recitals, available from the Music Program Coordinator. Requires concurrent enrollment in an appropriate Principal Studio course. Graded CR/NC.

Music Performance–Class Instruction
MUSI 1181, 1182, 2181, 2182. 1 sem. hr.
CLASS PIANO I, II, III, IV
Group instruction in piano for music majors, covering piano technique and literature, major and minor scales, transposition, sight reading, and simple harmonization of melodies. Keyboard majors accepted for degree-level study should substitute four semesters of Secondary Applied Studio.

MUSI 1302. 3 sem. hrs.
NON-MAJOR CLASS PIANO I
Group instruction in the elements of piano playing, designed for the non-major. No previous experience necessary.

MUSI 1303 (MUSI 1303) 3 sem. hrs.
BASIC GUITAR I
Group instruction in the fundamentals of guitar playing, designed for the non-major. The student must furnish an acceptable instrument. No previous experience necessary.

MUSI 2302. 3 sem. hrs.
NON-MAJOR CLASS PIANO II
Extension of skill development begun in MUSI 1302 Non-Major Class Piano I. Prerequisite: successful completion of MUSI 1302 or permission of instructor.

MUSI 2303. 3 sem. hrs.
BASIC GUITAR II
Extension of skill development begun in MUSI 1303 - BASIC GUITAR I. The student must furnish an acceptable instrument. Prerequisite: successful completion of MUSI 1303 or prior permission of instructor.

MUSI 3370. 3 sem. hrs.
CLASS VOICE
Group instruction and practical experience in the fundamentals of voice production, music reading, and song interpretation. Dramatic stage movement and singing will be explored using Classical and Broadway song literature. This course is designed for the non-major. No previous experience is necessary.

Music Performance–Ensembles
Membership in music ensembles is open to all University students. Ensembles meet for periods of rehearsal ranging from two to five hours each week. All ensemble courses carry one semester hour of credit, and all may be repeated for credit. Some degree programs limit the amount of such credit that may be applied to the degree. In some instances, an audition with the ensemble director may be required for admission to the course. Every full-time music major must enroll, participate, and receive a passing grade in a major ensemble every semester except the student teaching semester. For rotation of music courses see departmental office.

Music Appreciation
MUSI 1306 (MUSI 1306) 3 sem. hrs.
UNDERSTANDING AND ENJOYING MUSIC
A course for the non-music major. Study of selected music literature of contrasting styles and forms with emphasis on listening to music with understanding. Satisfies the university core curriculum requirement in fine arts.

MUSI 3310. 3 sem. hrs.
HISTORY OF JAZZ
A study of jazz styles, influences, trends, innovators, and literature. Readings include interviews and articles that discuss origins of jazz, definitions of jazz, and race politics of jazz. No previous experience is necessary.

Music Business and Technology
MUSI 3313. 3 sem. hrs.
APPLICATIONS OF MUSIC TECHNOLOGY
Applied experiences in the use of computer hardware, computer software, and electronic technology as it pertains to the discipline of music. Satisfies the university computer literacy requirement.

MUSI 3315. 3 sem. hrs.
RECORDING TECHNIQUES
An examination of the art of audio recording. Topics include signal flow of the mixing console, recording and sound reinforcement, application and techniques for microphones, use of sonic effects, synchronization formats and recording devices.
MUSI 3320. 3 sem. hrs.  
MUSIC BUSINESS SURVEY  
Overview of the practices and procedures of the music industry, including such topics as career possibilities, publishing, labels, marketing and copyright law.  

MUSI 3321. 3 sem. hrs.  
MUSIC BUSINESS II  
This course is a topic specific examination of the practices and procedures of the music industry, including starting a music business, marketing, and copyrights. Success in the Music Business II is based on the process of identifying opportunities in the entertainment marketplace, exploring potential resources to pursue those opportunities, and committing to action the resources necessary to exploit the opportunities for long-term gain.

Music Theory  
MUSI 1116 (MUSI 1116) 1 sem. hr.  
AURAL TRAINING I  
A companion course to MUSI 1311, designed to strengthen the understanding of theoretical principles through the development of aural perception and skills; exercises in melodic, harmonic, and rhythmic dictation; and drill in sight singing.  

MUSI 1117 (MUSI 1117) 1 sem. hr.  
AURAL TRAINING II  
Continuation of MUSI 1116; a companion course to MUSI 1312. Prerequisite: Passing score on the Music Department Theory Fundamentals Placement Exam OR prior completion of MUSI 1116 and MUSI 1311 with grades of “C” or better.  

MUSI 1311 (MUSI 1311) 3 sem. hrs.  
MUSICIANSHIP I  
First principles of chord progression and phrase harmonization. Theory assessment required prior to enrollment.  

MUSI 1312 (MUSI 1312) 3 sem. hrs.  
MUSICIANSHIP II  
Continuation of MUSI 1311, with a study of more advanced chord structures and their placement within the phrase through written exercises, analysis, and correlated keyboard projects. Prerequisite: Passing score on the Music Department Theory Fundamentals Placement Exam OR prior completion of MUSI 1116 and MUSI 1117 with grades of “C” or better.  

MUSI 2116 (MUSI 2116) 1 sem. hr.  
AURAL TRAINING III  
Continuation of MUSI 1117; a companion course to MUSI 2311. Designed to further the understanding of advanced theoretical principles and techniques through related aural exercises, dictation, and sight singing. Prerequisite: Prior completion of MUSI 1117 and MUSI 1312 with a grade of “C” or better.  

MUSI 2117 (MUSI 2117) 1 sem. hrs.  
AURAL TRAINING IV  
Continuation of MUSI 2116; a companion course to MUSI 2312. Prerequisite: Prior completion of MUSI 2116 and MUSI 2311 with a grade of “C” or better.  

MUSI 2311 (MUSI 2311) 3 sem. hrs.  
MUSICIANSHIP III  
Continuation of MUSI 1312. A broad summary of classical and chromatic harmony, explored through written exercises, analysis, and correlated keyboard drill. Prerequisite: Prior completion of MUSI 1312 and MUSI 1117 with a grade of “C” or better.  

MUSI 2312 (MUSI 2312) 3 sem. hrs.  
MUSICIANSHIP IV  
Continuation of MUSI 2311. An exploration of 20th-century techniques through written exercises, analysis, and correlated keyboard drill. Prerequisite: Prior completion of MUSI 2311 and MUSI 2116 with a grade of “C” or better.  

MUSI 3345. 1-3 sem. hrs.  
COMPOSITION  
Creative writing with a view toward developing an individual style of musical composition. Variable credit, 1, 2, or 3 hrs. One private lesson per week. Prior permission of the instructor is required. May be repeated for credit. Music Studio course fee schedule is applicable to this course.  

MUSI 3346. 3 sem. hrs.  
FORM AND ANALYSIS OF TONAL MUSIC  
Analysis of the melodic and harmonic design of tonal music, including the aural and visual analysis of scores for piano, voice, chamber ensembles, and orchestra. Prerequisite: Prior completion of MUSI 2312 and MUSI 2117 with a grade of “C” or better.  

MUSI 4346. 3 sem. hrs.  
ORCHESTRATION AND ARRANGING  
The compass, timbre, and techniques of arranging and/or orchestration for instruments and/or voices. Practical experience in arranging for orchestra, band, and other instrumental and vocal combinations. Prerequisite: Prior completion of MUSI 2312 and MUSI 2117 with grades of “C” or better.  

Music History and Literature  
MUSI 1307 (MUSI 1307) 3 sem. hrs.  
ELEMENTS OF MUSICAL STYLE  
A survey of selected western and non-western musical styles, based upon the analysis of the characteristic use of the elements of music. Required for music majors and recommended for non-majors with a significant high school music background. Satisfies the university core curriculum requirement in fine arts.  

MUSI 4334. 3 sem. hrs.  
HISTORY OF WESTERN MUSIC I  
An in-depth study of the evolution of Western musical style from antiquity through the 18th-century. Prerequisite: Prior completion of MUSI 1307, MUSI 2312, and MUSI 2117 with grades of “C” or better.  

MUSI 4335. 3 sem. hrs.  
HISTORY OF WESTERN MUSIC II  
Continuation of MUSI 4334, an in-depth study of the evolution of Western musical style from the age of Beethoven to the present. Prerequisite: Prior completion of MUSI 4334 with a grade of “C” or better.  

Music Education and Performance Pedagogy  
MUSI 3166. 1 sem. hr.  
WOODWIND TECHNIQUES I  
Basic techniques of playing and teaching the oboe, bassoon, and saxophone. Includes a survey of pedagogical materials and basic performance literature. For music majors only.
Course Descriptions

MUSI 3167. 1 sem. hr.
WOODWIND TECHNIQUES II
Basic techniques of playing and teaching the flute and clarinet. Includes a survey of pedagogical materials and basic performance literature. For music majors only.

MUSI 3168. 1 sem. hr.
BRASS TECHNIQUES I
Basic techniques of playing and teaching the trumpet and French horn. Includes a survey of pedagogical materials and basic performance literature. For music majors only.

MUSI 3169. 1 sem. hr.
BRASS TECHNIQUES II
Basic techniques of playing and teaching the trombone, euphonium, and tuba. Includes a survey of pedagogical materials and basic performance literature. For music majors only.

MUSI 3170. 1 sem. hr.
VOICE TECHNIQUES FOR INSTRUMENTALISTS
Group instruction and practical experience in the fundamentals of voice production and song interpretation for the instrumental music educator. Includes a survey of pedagogical materials and basic performance literature. For music majors only.

MUSI 3188. 1 sem. hr.
PERCUSSION TECHNIQUES
Basic techniques of playing and teaching the instruments of the percussion family. Includes a survey of pedagogical materials and basic performance literature. For music majors only.

MUSI 3189. 1 sem. hr.
STRING TECHNIQUES
Basic techniques of playing and teaching the violin, viola, cello, and string bass. Includes a survey of pedagogical materials and basic performance literature. For music majors only.

MUSI 3252. 2 sem. hrs.
FOUNDATIONS OF MUSIC PROGRAMS
A survey of the historical, social, and philosophical bases of music education in the United States, psychological theories of learning and musical responsiveness, and studies of how these foundations have been applied in various types of music curricula. Prerequisite: Prior completion of MUSI 2311 and MUSI 2116 with grades of “C” or better.

MUSI 3253. 2 sem. hrs.
BASIC CONDUCTING
A skills acquisition course designed to give students competence in basic baton techniques and musical control of an ensemble. Includes score study and musical terminology. Prerequisite: Prior completion of MUSI 2311 and MUSI 2116 with grades of “C” or better.

MUSI 3264. 2 sem. hrs.
DICTION FOR SINGERS
Development of sufficient fluency with the International Phonetic Alphabet to allow practical applications in learning and teaching proper pronunciation of song texts in English, Italian, German, French, and Spanish. For music majors only.

MUSI 3354. 3 sem. hrs.
ADVANCED CONDUCTING
A continuation of MUSI 3252. Advanced experiences with score preparation and effective ensemble rehearsal and management techniques. Prerequisite: Prior completion of MUSI 3252 with a grade of “C” or better.

MUSI 4340. 3 sem. hrs.
STUDIES IN REPERTOIRE
Systematic examination of the history and literature of a specific performance medium.

MUSI 4355. 3 sem. hrs.
MUSIC FOR YOUNG CHILDREN
Study of musical development in children in grades K-6. Study of and practical experience with pedagogical approaches and materials appropriate for that age group. Prerequisite: Prior completion of MUSI 3252 with a grade of “C” or better.

MUSI 4357. 3 sem. hrs.
CHORAL LITERATURE AND TECHNIQUES
Advanced study of the literature, pedagogy, and management techniques required for successful vocal ensembles in secondary schools. Prerequisite: Prior completion of MUSI 3253 with a grade of “C” or better.

MUSI 4358. 3 sem. hrs.
INSTRUMENTAL LITERATURE AND TECHNIQUES
Advanced study of the literature, pedagogy, and management techniques required for successful instrumental ensembles in secondary schools. Includes a segment pertaining to the development of marching band shows. Prerequisite: Prior completion of MUSI 3253 with a grade of “C” or better.

MUSI 4360. 3 sem. hrs.
STUDIES IN PEDAGOGY
Methods, materials and psychology of presenting musical materials to students at various ages. Evaluation of teaching materials and techniques. Classes are organized by specific performance areas.

Special Courses

MUSI 4390. 1-3 sem. hrs.
TOPICS IN MUSIC
May be repeated for credit when topics vary.

MUSI 4396. 1-3 sem. hrs.
DIRECTED INDIVIDUAL STUDY
See College description. Offered on application.

MUSI 4398. 3 sem. hrs.
APPLIED EXPERIENCE
See College description. Offered on application.

NURSING (NURS)___________________

Generic (Basic) Option

The numbers of weekly lecture and laboratory hours associated with each course are designated by (lecture:lab) following the semester hours (1 lab hour = 3 contact hours.) Additional laboratory work may be required to complete the assignments. All courses involving labs will require appropriate fees.

NURS 3318. 3 sem. hrs. (3:0)
NURSE AS THERAPEUTIC COMMUNICATOR
Emphasis is on caring communication as an essential dimension of professional nursing. Theories are presented to explain the dynamic relationship between human behavior, health, and illness, and the impact of interpersonal relationship skills to effect positive changes in individuals and their families. Nurse communication in the role of educator will be introduced as part of the teaching/learning course content.
NURS 3342. 3 sem. hrs. (3:0)
USE OF PHARMACOLOGY PRINCIPLES
Focuses on the basic drug classifications, concepts and principles of pharmacology, with special consideration for the nursing role in developing a comprehensive approach to the clinical application of drug therapy through the use of the nursing process. Nursing implications relative to the utilization of drug therapy are examined. Dosage calculations are evaluated for competency.

NURS 3435. 4 sem. hrs. (3:3)
HEALTH ASSESSMENT
Focuses on health assessment skills and application of the nursing process in selected pathophysiological disorders through analysis and synthesis of information obtained from subjective and objective data collection methodologies. Specified frameworks are utilized for data categorization and processing. The data are used to make judgments about health status or determine care needs for a given individual. Students are assigned to a weekly two-hour lab in order to practice under supervision and demonstrate health assessment skills.

NURS 3548. 5 sem. hrs. (3:6)
NURSING CARE OF CHILDREN AND THEIR FAMILIES
Applying a family-centered approach, this course focuses on health promotion, acute and chronic health conditions, and rehabilitative needs of children. Emphasis is placed on developmental, physiological, psycho-social, cultural, and spiritual care of the child within the family unit. Using the nursing process, strategies are formulated for promoting and maintaining optimal functioning of the child-family unit and for enhancing the strengths of the family unit. Clinical activities emphasize the application of theory to practice in a variety of acute care settings. Prerequisites: NURS 3318, 3342, 3435 and 3614.

NURS 3550. 5 sem. hrs. (3:6)
NURSING CARE OF PARENTS/NEWBORNS
A study of the theoretical and empirical basis for nursing care of childbearing families using both nursing and developmental theories. Biopsychosocial factors such as legal/ethical and cultural considerations related to pregnancy, birth and newborn periods are included. A historical overview of obstetrical advances and parent-child nursing will be presented. Practice in providing nursing care to families during each phase of the childbearing cycle will occur in selected local hospitals and clinics. The nursing process is used with emphasis on the theoretical and empirical basis of practice. Experience in patient/family teaching such as childbirth classes is included. Prerequisites: NURS 3318, 3435, and 3614. Pre-Corequisite: 3342.

NURS 3614. 6 sem. hrs. (3:9)
FUNDAMENTALS OF NURSING CARE
Fundamentals of Nursing Care is developed for the incoming nursing student and introduces them to nursing practice and philosophies that underpin clinical practice. Fundamental nursing skills are an integral part of the nursing experience and include, but are not limited to, patient safety, with a focus on techniques related to environmental concerns, positioning and transporting, asepsis and sterile technique, medication administration, and selected invasive therapies. The critical thinking process, art of caring, and nursing theories upon which clinical practice is based will be integrated throughout the course to provide and manage safe, holistic care practices. The campus laboratory and clinical settings will afford practical experiences that include simulation and direct patient care interventions. These experiences facilitate learner application and integration of the principles and skills taught in the theory portion of this class. Students are expected to demonstrate beginning competency in application of the nursing process. Pre-requisite NURS 4322; Co-requisite: 3435, 3318.

NURS 3628. 6 sem. hrs. (3:9)
NURSING CARE OF ADULTS I
Introduces the student to the use of the nursing process in the care of adults with chronic or non-complex illness. Uses a systems approach to discuss the effects of illness on individual and family, and to examine the disruption of growth and development patterns across the lifespan from young adult to senior years. The course includes clinical laboratory to allow the student the opportunity to apply theoretical concepts to clinical practice in diverse adult populations. Prerequisites: NURS 3318, 3342, 3435, and 3514. Prerequisites: NURS 3318, 3435, and 3614. Pre-Corequisite: 3342.

NURS 4250. 2 sem. hrs. (2:0)
PROFESSIONAL NURSING ISSUES
Concentrates on legal, ethical, economic and political issues affecting the nurse as an individual and a professional, and health care delivery to clients, groups and aggregates. Consideration is given to self-discovery, personal assertiveness, role conflict, negotiation and collective bargaining. Students are encouraged to apply critical thinking strategies during classroom discussions and presentations. Prerequisites: NURS 3318, 3342, 3435, 3614, and Pre-Corequisite: NURS 3628, 4564, 3548, 3550.

NURS 4318. 3 sem. hrs. (3:0)
NURSE AS RESEARCH CONSUMER
Study of theory and research as a base for nursing practice. Critically analyzes published research studies with regard to implications for clinical practice. The course is planned for collaborative peer examination of the research process through critique of nursing studies. Prerequisites: MATH 1442, 1342, or 2342. The web-based version of this course (NURS 4318W01) satisfies the university computer literacy requirement.

NURS 4322. 3 sem. hrs. (3:0)
HEALTH ALTERATIONS
Relates manifestations of disease, risk factors for disease, and the principles of pathology underlying illness and injury to therapeutic nursing interventions and outcomes. Prerequisites: BIOL 2401 and BIOL 2402. May be taken in place of BIMS 3401 Pathophysiology.

NURS 4564. 5 sem. hrs. (3:6)
NURSING CARE OF PSYCHIATRIC CLIENTS
Focus is on the nurse as a provider of care to individuals, families and groups experiencing psychiatric-mental health problems. Theoretical foundations for the practice of psychiatric-mental health nursing will be studied. Application of nursing process to promote, maintain or restore mental health of individuals, families and groups. During the clinical experience, students will demonstrate theory-based practice and collaboration with interdisciplinary team participants. Prerequisites: NURS 3548 or 3550 or 3628.
NURS 4628. 6 sem. hrs. (3:9)
NURSING CARE OF ADULTS II
Presents to the senior student critical thinking and problem-solving strategies for care of adults with acute or complex illness and/or injury. The effects of acute illness are examined in relation to the individual’s developmental stage, culture, and gender. Building on Nursing Care of Adults I, a systems approach is used to analyze and intervene in alterations to the health of the individual and family. The course includes clinical laboratory to allow the student the opportunity to integrate theoretical concepts and clinical practice in diverse populations. Prerequisites: NURS 3548, 3550, and 3628.

NURS 4660. 6 sem. hrs. (3:9)
NURSING CARE OF COMMUNITY HEALTH CLIENTS
Explores Community Health Nursing, focusing on historical development, philosophy, health care systems, epidemiology, and specific target groups. Primary, secondary and tertiary prevention activities are emphasized as they relate to individuals, families, and aggregates. Applies theoretical and empirical knowledge in using the nursing process in community settings to promote, maintain and restore health. Focuses on transcultural nursing concepts, rural and home health care delivery. Progressively more independent behaviors are expected of students in community health practice. Diverse roles of the community and public health nurse are examined and a community assessment is completed using research and data processing skills. Prerequisites: NURS 3614, 3318, 3435.

NURS 4670. 6 sem. hrs. (3:9)
NURSE COORDINATING CARE
Uses a systems framework and critical thinking strategies to study the coordinating role of the professional nurse within health care delivery. Current theories of management, leadership and change are examined and related to nursing practice. Focuses on synthesis of this knowledge to develop innovative and creative approaches to nursing practice. Applies theoretical and empirical concepts through supervised experiences gained in local health care institutions. Students will participate in several activities that demonstrate their understanding of leadership principles applied to nursing in their classroom and clinical course work. Prerequisite: NURS 4564. Pre-Co-require: NURS 4318, 4628.

NURSING ELECTIVES
Nursing electives may be taken any semester an elective is offered. Electives are not required within the nursing degree plan but may be taken to increase breadth and depth of the student’s learning experience. Electives are offered under the following numbers:

NURS 4380. 1-3 sem. hrs.
NURSING HONORS
Provides superior nursing students who have demonstrated ability to function independently an opportunity to design and implement a creative learning experience in an area of interest. Prerequisites: Must be in last semester of senior year and meet eligibility requirements for nursing honors.

NURS 4390. 1-3 sem. hrs.
DIMENSIONS IN NURSING
Focuses on literature study and in-depth knowledge of selected topics relevant to the nurse as a professional provider of care or coordinator of care. Variable content is directed by faculty specialties.

NURS 4396. 1-3 sem. hrs.
DIRECTED INDEPENDENT STUDY
The College offers courses in directed independent study. The student must register for a specific number of credit hours according to a course plan approved by the Instructor, Undergraduate Chair, and the Dean in advance of registration.

RN-BSN Option
General Education Requirements
Students must complete the University Core Curriculum Program. (See “University Core Curriculum Programs” in this catalog. See “General Education Requirement” in the “Undergraduate Programs” section of this catalog for information on ways in which transfer students can fulfill requirements.) In addition to the core curriculum requirements, students must also take the required support courses, which are listed earlier in the nursing section of this catalog.

NURS 4335. 4 sem. hrs. (3:3)
HEALTH ASSESSMENT
Focuses on health assessment skills and application of the nursing process in selected pathophysiological disorders through analysis and synthesis of information obtained from subjective and objective data collection methodologies. Specified frameworks are utilized for data categorization and processing. The data are used to make judgments about health status or determine care needs for a given individual.

NURS 4250. 2 sem. hrs. (2:0)
PROFESSIONAL NURSING ISSUES
Concentrates on legal, ethical, economic and political issues affecting the nurse as an individual and a professional, and health care delivery to clients, groups and aggregates. Consideration is given to self-discovery, personal assertiveness, role conflict, negotiation and collective bargaining. Students are encouraged to apply critical thinking strategies during classroom discussions and presentations.

NURS 4318. 3 sem. hrs. (3:0)
NURSE AS RESEARCH CONSUMER
A study of theory and research as a base for nursing practice. Critical analysis of published research studies with regard to implications for clinical practice. The course is planned for collaborative peer examination of the research process through critique of nursing studies. Pre/Co-requisite: MATH 1342, 1442, or 2342. The web-based version of this course (NURS 4318W01) satisfies the university computer literacy requirement.

NURS 4320. 3 sem. hrs. (3:0)
PRINCIPLES AND CONCEPTS OF PATIENT EDUCATION
Provides opportunities for students to apply principles of teaching and learning with clients, families and identified groups. Special emphasis is placed on patient teaching within a rapidly changing health care environment. Students will examine learning readiness and intervene with groups and families from diverse backgrounds and educational preparation.
NURS 4322. HEALTH ALTERATIONS 3 sem. hrs. (3:0)
Relates manifestations of disease, risk factors for disease, and the principles of pathology underlying illness and injury to therapeutic nursing interventions and outcomes. Prerequisites: BIOL 2401 and BIOL 2402. May be taken in place of BIMS 3401 Pathophysiology.

*NURS 4324. NURSE AS CAREGIVER 3 sem. hrs. (3:0)
Emphasis is on socialization into professional nursing. Theories are presented to explain the relationship between human behavior, health and illness and the impact of interpersonal relationship skills to effect positive changes in individuals. Application of caring theories as a basis for decision-making in nursing practice with clients and families is the focus of clinical activities.

NURS 4465. CARE OF THE INDIVIDUAL WITHIN A FAMILY 4 sem. hrs. (2:6)
Utilizes a health patterns framework with systematic nursing inquiry to examine the impact of illness on families. In addition, primary, secondary, and tertiary prevention activities are emphasized as they relate to individuals, families, and aggregates. Data from individual and family assessment is used to judge and design interventions and evaluate client(s) outcomes.

NURS 4560. NURSING CARE OF COMMUNITY 5 sem. hrs. (3:6)
Explores community health nursing, focusing on historical development, philosophy, health care systems, epidemiology, and individuals, families, and specific aggregate groups. Applies theoretical and empirical knowledge in using the nursing process in community settings to promote, maintain and restore health. Focuses on transcultural nursing concepts, rural and home health care delivery. Progressively more independent behaviors are expected of students in community health practice. Diverse roles of the community and public health nurse are examined and a community assessment is completed using research and data processing skills. Prerequisites: NURS 4318, 4324.

NURS 4671. LEADERSHIP/MANAGEMENT 6 sem. hrs. (6:0)
Uses a systems framework and critical thinking strategies to study the coordinating role of the professional nurse within health care delivery. Current theories of management, leadership and change are examined and related to nursing practice. Focuses on synthesis of this knowledge to develop innovative and creative approaches to nursing practice. Applies theoretical and empirical concepts through experiences gained in local health care institutions. Prerequisites: NURS 4318, 4324.

NURS 4390. DIMENSIONS IN NURSING 1-3 sem. hrs.
Focuses on literature study and in-depth knowledge of selected topics relevant to the nurse as a professional provider of care or coordinator of care. Variable content is directed by faculty specialties.

NURS 4396. DIRECTED INDEPENDENT STUDY 1-3 sem. hrs.
The College offers courses in directed independent study. The student must register for a specific number of credit hours according to a course plan approved by the instructor, Undergraduate Chair and the Dean in advance of registration.

*Students in RN-MSN option may complete *courses by challenge exams. See the RN-MSN option under the nursing section in the graduate catalog.

OCCUPATIONAL TRAINING AND DEVELOPMENT (OCTD) ___________

OCTD 3390. INSTRUCTIONAL MEDIA 3 sem. hrs.
Covers basic media, hardware, and software currently in use in the instructional and training fields. Techniques of operating media and equipment will be included. This course meets the university computer literacy requirement.

OCTD 4305. METHODS OF TEACHING CAREER AND TECHNOLOGY EDUCATION SUBJECTS 3 sem. hrs.
A basic course in the utilization of training methodology, including methods and technologies of learning. Prerequisite: OCTD 4335 completion of or concurrent enrollment. (May be taken for graduate credit.)

OCTD 4335. DEVELOPMENT, ORGANIZATION AND USE OF INSTRUCTIONAL MATERIALS 3 sem. hrs.
Planning for the delivery of the lesson cycle supplemented with appropriate media and materials. Material development, resources and learning assessment will be included. (May be taken for graduate credit.)

OCTD 4336. SHOP AND CLASSROOM ORGANIZATION AND MANAGEMENT 3 sem. hrs.
Organization and management aspects of shops and laboratories. Includes space requirements, equipment, general arrangement, and safety. (May be taken for graduate credit.)

OCTD 4337. SELECTION, PLACEMENT AND FOLLOW-UP IN CAREER AND TECHNOLOGY EDUCATION 3 sem. hrs.
Coordination activities among the school, the community and business/industry essential for developing career and technology workbased programs. (May be taken for graduate credit.) Topics include procedures for student recruitment, selection of occupations and training stations, coordination of the student’s school and on-the-job educational experiences, maintenance of good public relations, classroom organization, preparation and maintenance of an effective record system. (May be taken for graduate credit.)

OCTD 4338. HUMAN RELATIONS FOR CAREER AND TECHNOLOGY EDUCATION TEACHERS 3 sem. hrs.
The career and technology education teacher’s development of effective relationships with students, parents, other teachers, administrators, business/industry, and the community. Also addresses the learning environment’s influence on the student/trainee. (May be taken for graduate credit.)
Course Descriptions

OCTD 4339. HISTORY OF CAREER AND TECHNOLOGY EDUCATION TRAINING
A history of training and the principles, philosophy, and practices developed by that history. (May be taken for graduate credit.)

OCTD 4340. ANALYSIS AND COURSE MAKING
Course development as related to occupational trends, changes, and needs. Focuses on identifying, analyzing, and designing a course of study for the pre-employment laboratory and work based learning classes.

OCTD 4387. CAREER AND TECHNOLOGY EDUCATION FOR THE EXCEPTIONAL CHILD
Strategies and procedures for teaching career and technology education to the handicapped, including independent living and socialization skills. Students with credit for OCTD 4387 may not receive credit for SPED 4320. (May be taken for graduate credit.)

OCTD 4696. DIRECTED INDIVIDUAL STUDY
Programs will be designed for individual cases through special permission of the Department Chair and Dean. May be repeated for credit when the topic varies.

OCTD 4698. OCCUPATIONAL TRAINING AND DEVELOPMENT INTERNSHIP
Laboratory experience in a career and technology education classroom or some other functional activity (e.g., administration) after demonstrating mastery of teaching competencies. Grade assigned will be “credit” (CR) or “no credit” (NC).

OPERATIONS MANAGEMENT (OPSY)

OPSY 4314. OPERATIONS MANAGEMENT
The design, operation, and control of the transformation process in both service and production operations. Includes analysis and application of various decisions regarding site selection, process and facilities design, capacity planning, scheduling techniques, materials management, and cost and quality control. Prerequisites: ORMS 3310 and Junior standing or above.

OPSY 4345. MATERIALS MANAGEMENT AND PURCHASING
Management of ordering, storage and distribution of the materials and services purchased by the organization. Emphasis on skill and knowledge required in the practice of purchasing, inventory management and cost reduction in materials. Prerequisite: OPSY 4314 and Junior standing or above.

OPSY 4390. CURRENT TOPICS IN OPERATIONS MANAGEMENT
Selected topics for special study related to operational functions, processes, or issues. May be repeated for credit when topics vary. Prerequisites: Junior standing or above, and others depending on topic. Contact the Dean’s office for information.

OPSY 4396. DIRECTED INDIVIDUAL STUDY
Individual supervised study and a final report. Prerequisites: permission of instructor, Junior standing or above, and others depending on selected topic. Inquire at the Dean’s office for information.

OPERATIONS RESEARCH MANAGEMENT SCIENCE (ORMS)

ORMS 3310. DATA ANALYSIS AND STATISTICS
A study of descriptive statistics, probability distributions, the normal distribution, confidence intervals and hypothesis testing, regression analysis and chi-square. Prerequisites: BUSI 0011, MATH 1314 and MYSIS 2305 or equivalents.

PHILOSOPHY (PHIL)

The numbers of weekly lecture and laboratory hours associated with each course are designated by (lecture:lab) following the semester hours (1 lab hour = 3 contact hours). Additional laboratory work may be required to complete the assignments. All courses involving labs will require appropriate fees.

PHIL 1301 (PHIL 1301) INTRODUCTION TO PHILOSOPHY
An examination of major philosophical issues such as the existence of God, freedom and determinism, moral rights and obligations, and the nature and limits of human knowledge. (Replacing PHIL 3310.)

PHIL 2303 (PHIL 2303) INTRODUCTION TO LOGIC AND CRITICAL THINKING
Basic principles and techniques used in understanding, constructing, and evaluating arguments. Topics covered may include formal methods of analyzing arguments, informal fallacies, scientific reasoning, and moral arguments. (Replacing PHIL 3305.)

PHIL 3322. MODERN PHILOSOPHY
A study of some of the major philosophical developments of the 17th-20th centuries, focusing on topics such as the relation between mind and body, religious belief and the problem of evil, and the limits of human knowledge.

PHIL 3340. 3 sem. hrs. (1.5:1.5) FOUNDATIONS OF PROFESSIONAL ETHICS
Lectures present overview of ethical theories and basic principles of ethical reasoning. Students also enroll in and attend weekly recitation sections, involving application of theories and principles to ethical problems that arise in various professions. Weekly lecture and recitation hours are designated above (lecture: recitation) following the semester hours. (This course satisfies the University core requirement for philosophy.)

PHIL 4331. ISSUES IN PHILOSOPHY OF RELIGION
Standard philosophical methods will be used to explore issues such as the existence and nature of God, the problem of evil, and the relationship between morality and religion.

PHIL 4390. TOPICS IN PHILOSOPHY
Study of important philosophical themes and figures. May be repeated for credit when topics vary. Topics
PHYSICS (PHYS)

Weekly lecture and laboratory hours associated with each course are designated by (lecture:lab) following the semester hours.

PHYS 1401 (PHYS 1401) 4 sem. hrs. (3:3)
GENERAL PHYSICS I
Introduction to Newtonian physics. Topics include Aristotelian physics and its overthrow, Newton’s laws of motion and gravitation, and the motion of particles, rigid bodies and fluids. The idea of the universe as a law-governed system will be developed. Laboratory activities provide introduction to empirical methods in science. This course counts toward the natural science component of University Core Curriculum. Prerequisite: MATH 1314 or placement beyond MATH 1314.

PHYS 1402 (PHYS 1402) 4 sem. hrs. (3:3)
GENERAL PHYSICS II
Introduction to oscillatory and wave phenomena, electricity and magnetism. The classical theory of fields will be used to study electric and magnetic phenomena, including light, and their role in modern technology. Laboratory activities provide introduction to empirical methods in science. This course counts toward the natural science component of University Core Curriculum. Prerequisite: MATH 1314 or placement beyond MATH 1314, and PHYS 1401 or PHYS 2425.

PHYS 2425 (PHYS 2425) 4 sem. hrs. (3:3)
UNIVERSITY PHYSICS I
A calculus based introduction to Newtonian physics. Topics include Aristotelian physics and its overthrow, Newton’s laws of motion and gravitation, and the motion of particles, rigid bodies, and fluids. The idea of the universe as a law-governed system will be developed. Laboratory activities provide introduction to empirical methods in science. This course counts toward the natural science component of University Core Curriculum. Prerequisite: MATH 2413 or placement beyond MATH 2413.

PHYS 2426 (PHYS 2426) 4 sem. hrs. (3:3)
UNIVERSITY PHYSICS II
Calculus based introduction to oscillatory and wave phenomena, electricity and magnetism. The classical theory of fields will be used to study electric and magnetic phenomena, including light, and their role in modern technology. This course counts toward the natural science component of University Core Curriculum. Prerequisites: PHYS 2425 and MATH 2414 (or placement beyond MATH 2414).

PHYS 3311. 3 sem. hrs. (3:0)
CLASSICAL MECHANICS
Fundamentals of classical mechanics. Topics include particle dynamics in one, two and three dimensions: conservation laws; dynamics of a system of particles; motion of rigid bodies; central force problems; accelerating coordinate systems; Newton’s theory of gravitation; Lagrange’s and Hamilton’s formulations of classical mechanics. Prerequisite: PHYS 2426. Corequisite: MATH 3315.

PHYS 3312. 3 sem. hrs. (3:0)
MODERN PHYSICS
A course in special relativity and elementary quantum mechanics. Topics include relativistic description of space-time, relativistic energy and momentum, the uncertainty principle, Schrödinger’s equation, observables and operators, bound states, potential barriers, and the quantum description of the hydrogen atom. Prerequisite: PHYS 2426. Corequisite: MATH 3315.

PHYS 3490. 1-4 sem. hrs.
SELECTED TOPICS
Subject materials will be chosen from Electromagnetic Field Theory, Thermodynamics, Mathematical Methods of Physics, Waves and Optics, Advanced Modern Physics, Quantum Theory, Computational Physics, Geophysics, Environmental Physics and Medical Physics. May be repeated for credit if topics selected are different. Prerequisites vary. Instructor’s permission required.

POLITICAL SCIENCE (POLS)

POLS 2305 (GOVT 2305) 3 sem. hrs.
U.S. GOVERNMENT & POLITICS
A basic survey of American government, including fundamental political institutions, with special attention to the United States and Texas Constitutions. (Meets the University core requirement and the Texas state statutory requirement for U.S. and Texas constitutions.)

POLS 2306 (GOVT 2306) 3 sem. hrs.
STATE AND LOCAL GOVERNMENT
The politics, government, and administration of American states, counties, cities, and special districts, with special emphasis on Texas. (Meets the University core requirement and the Texas state statutory requirement in Texas government.)

POLS 3303. 3 sem. hrs.
CONTEMPORARY POLITICAL ANALYSIS
Analysis of current problems in national and international politics. Emphasis is on methods of analysis, particularly the use of computers. Includes a segment on career opportunities for political science majors. Satisfies university computer literacy requirement.

POLS 3311. 3 sem. hrs.
WOMEN AND POLITICS
The course will examine public policies affecting women, political participation, women in public office, and political attitudes of women.

POLS 3312. 3 sem. hrs.
CAMPAIGN POLITICS
A survey of the literature on campaigns and elections. The student may (but is not required to) work with the staff of a political candidate and will participate in a community survey.
POLS 3313. 3 sem. hrs.
THE LEGISLATIVE PROCESS
Survey and description of the legislative process in the United States Congress with relevant comparisons to practices within the several states and foreign nations. Emphasis upon the law-making process explained in terms of structure, participants, groups, associations and power relationships.

POLS 3314. 3 sem. hrs.
ELECTIONS & PUBLIC OPINION
An examination of voter choice models, campaign effects, and contemporary issues arising from the electoral process. An analysis of the kinds and distributions of opinions and attitudes in the mass public and the effects of those opinions on activities of policy makers.

POLS 3315. 3 sem. hrs.
PARTIES & INTEREST GROUPS
The role and significance of parties and interest groups in the political process. The origins, functions, structures, objectives and political activities of political parties and interest groups.

POLS 3316. 3 sem. hrs.
THE AMERICAN PRESIDENCY
A study of the federal executive branch with an emphasis upon the American Presidency with its relationships to other American political institutions and processes. (Suggested background POLS 2305.)

POLS 3317. 3 sem. hrs.
JUDICIAL POLITICS
This course examines the political factors that influence judicial selection, decision-making and the policy-making role of courts. Furthermore, attention is directed at the impact of court decisions and the structure of the judiciary.

POLS 3321. 3 sem. hrs.
COMPARATIVE POLITICS
Concepts, theories and analytical frameworks for comparing different types of political systems around the world. Emphasis is placed on learning about different political systems and using the comparative method to evaluate and develop a richer understanding of politics, political culture, political behavior, and political institutions.

POLS 3331. 3 sem. hrs.
INTERNATIONAL RELATIONS
Examination of the structure and function of the international system focusing on the power relationships among states, international organizations, and the critical issues animating contemporary international relations.

POLS 3341. 3 sem. hrs.
INTRODUCTION TO PUBLIC ADMINISTRATION
Study of organization and management theories and practices of public administration affecting federal and subnational governments. Bureaucratic structures and procedures will be examined for their effects on policy, program development and evaluation.

POLS 3342. 3 sem. hrs.
INTRODUCTION TO PUBLIC POLICY
A survey of the policy process in the United States. The course will examine factors affecting the development, implementation and impact of public policies as well as a discussion of policy alternatives and controversies.

POLS 3351. 3 sem. hrs.
U.S. CONSTITUTION AND FEDERALISM
The course will examine the development of the U.S. Constitution since 1789 through legal decisions and interpretations. The development, evolution, and interpretations of federalism are also addressed. (Note: This course will complete the Texas Teacher Certification requirement in government for those who already have three semester hours in U.S. Government and need three additional semester hours that include the government and constitution of Texas.)

POLS 3361. 3 sem. hrs.
WESTERN POLITICAL THEORY
The fundamental concepts and problems of political theory, as viewed by the major classical philosophers and contemporary theorists, including justice, power, authority, obligation, freedom, equality.

POLS 3363. 3 sem. hrs.
THE ROOTS OF FREEDOM
The course will examine the ideology of our American and Texas systems of government. Students will study the Greek and Roman writers and philosophers who influenced the founders, Washington, Adams, Jefferson, and Madison, and will examine events and ideologies that played a role in the development of their philosophies. The history of such western political concepts as freedom, democracy, republic, constitutionalism, due process, and politics are also addressed.

POLS 3365. 3 sem. hrs.
POLITICAL THEORY & IDEOLOGIES
Major 19th and 20th-Century political theorists and ideological movements. Includes a review of capitalism, socialism, fascism, and liberalism.

POLS 4303. 3 sem. hrs.
SEMINAR IN POLITICAL SCIENCE
Capstone course for political science majors, examines significant developments and issue in American politics as they are addressed in the professional literature of political science. Offers the opportunity of an intensive study of a selected topic. Emphasis on supervised research on selected topic. Prerequisite: POLS 3303.

POLS 4311. 3 sem. hrs.
URBAN POLITICS
The institutions, political processes and policy issues of urban areas of the United States.

POLS 4312. 3 sem. hrs.
GOVERNMENT BUDGETING AND FINANCE
Study of the politics and processes of governmental budgeting at local, state, and federal levels with emphasis on the interrelatedness of governmental units through budgeting.

POLS 4314. 3 sem. hrs.
MEDIA AND POLITICS
Impact of mass media coverage on American political institutions, the election process, and public opinion in general and the appropriate role of media and news in a society.

POLS 4315. 3 sem. hrs.
MEXICAN AMERICAN POLITICS
Analysis of Mexican Americans in the American political system. Topics of inquiry include contemporary problems, political action, political participation, social policy, and political organization. Comparisons will be made between Mexican Americans and other Latino groups.
POLS 4320
THE POLITICS OF THE EUROPEAN UNION
Examination of the institutional, economic and political forces that led to the creation and development of the European Union. Emphasis on the impact the European Union has had on world affairs.

POLS 4322.
TRANSITIONS TO DEMOCRACY
Analysis of transitions to democracy from authoritarian rule. Various stages of the transition process and theories of democratization are assessed. Emphasis will be placed on “third wave” transitions to democracy.

POLS 4325.
POLITICS IN LATIN AMERICA
Latin American governments and politics as related to such topical problems and processes as land reform and expropriation.

POLS 4327.
THE POLITICS OF WAR
This course will examine the politics of war from ancient times to the present. Included in this survey are great generals and military strategists, from Sun Tzu to Napoleon to generals of the American Civil War. Students will study concepts of international law, the law of nations, and the laws of war. The course further examines military strategy and tactics of the 20th century.

POLS 4361.
AMERICAN POLITICAL THOUGHT
A survey of the major developments in American political thought from the Colonial period to the present, followed by an analysis of important recent theoretical developments in American political thought.

POLS 4390.
TOPICS IN POLITICAL SCIENCE
May be repeated for credit when topic varies.

POLS 4396.
DIRECTED INDIVIDUAL STUDY
See College description. Offered on application.

PSYCHOLOGY (PSYC)

PSYC 2301 General Psychology or its equivalent is required for admissions to ALL psychology courses beyond the 1000-level.

PSYC 2301 (PSYC 2301) 3 sem. hrs.
GENERAL PSYCHOLOGY
An introduction to the fundamental concepts and theories in psychology. Topics include biological processes, development, learning, personality, abnormal behavior, therapy, and social interactions. (This course satisfies the University core requirement in social science.)

PSYC 2314 (PSYC 2314) 3 sem. hrs.
LIFESPAN DEVELOPMENTAL PSYCHOLOGY
The study of normal physical, cognitive, social, and emotional development from infancy to late adulthood.

PSYC 2326 (PSYC 2319/SOCI 2326) 3 sem. hrs.
SOCIAL PSYCHOLOGY
The scientific study of how a person’s thoughts and behavior are influenced by others. Topics will include social cognition, attitudes, persuasion, interpersonal relationships, and group behavior. (Credit may not be given for both this course and SOCI 2326.)

PSYC 3325 3 sem. hrs.
CLOSE RELATIONSHIPS
This course is designed as an overview to the field of close relationships. The major theories of close relationships will be emphasized, including examinations of evolutionary, attachment, interdependence, and cognitive approaches. Additional topics include attraction, relationship development and maintenance, infidelity, and relationship violence.

PSYC 3326. 3 sem. hrs.
PSYCHOLOGY OF AGING
A study of adult development and aging, including emotional, biological, and cognitive functioning. Focuses on normal aging; views aging as a period of both decline and growth.

PSYC 3342. 3 sem. hrs.
COGNITIVE PSYCHOLOGY
A survey of current research and theory in the field of human cognition, emphasizing the information processing model. Topics include attention, memory, language, and problem solving.

PSYC 3343. 3 sem. hrs.
LEARNING AND MEMORY
The study of the fundamental principles of learning through a consideration of theories and constructs, such as reinforcement, practice, generalization, discrimination, and memory processes.

PSYC 3361. 3 sem. hrs.
PSYCHOLOGY OF PERSONALITY
An introduction to major theories of personality. Personality processes and development are discussed from psychoanalytic, behavioral, humanistic, and other perspectives.

PSYC 3363. 3 sem. hrs.
ABNORMAL PSYCHOLOGY
An introduction to the study of abnormal behavior. Studies the etiology and characteristics of the major behavioral disorders, including current research findings and treatment practices. Competency in personality psychology, such as that obtained by completing PSYC 3361, is assumed for this course.

PSYC 3374. 3 sem. hrs.
HUMAN SEXUALITY
The study of human sexual behavior from a biological and psychosocial perspective. Emphasizes current research methods and findings.

PSYC 3411. 4 sem. hrs.
EXPERIMENTAL PSYCHOLOGY
An introduction to the methods of scientific experimentation in psychology. Skills to critically analyze journal articles, design experiments, collect and analyze data, and write reports in APA style will be developed. Satisfies university computer literacy requirement. Prerequisite: MATH 1442 or its equivalent.

PSYC 4309. 3 sem. hrs.
HISTORY AND SYSTEMS OF PSYCHOLOGY
An in-depth study of the development of modern psychology through an examination of major philosophic, scientific, and social-political antecedents. Contemporary positions are discussed within the context of broader theoretical frameworks. Prerequisite: A student must have completed 24 hours of Psychology course work before registering for PSYC 4309.
PSYC 4332. CROSS-CULTURAL PSYCHOLOGY
This course is designed to provide students with both a theoretical and a practical understanding of the effects of culture on human thinking, values, and behavior. As such, it is focused on the effects of culture on the nature and behavior of individuals, their adaptations to institutions and environments, and their relations with others within and outside their culture. Knowledge presented in the class is drawn from both qualitative and quantitative research.

PSYC 4344. DRUG USE AND ABUSE
Study of the physiological, psychological, and social effects of drug use and abuse. Following a review of basic neuroanatomy and pharmacology, the actions and known effects of specific drugs of use and abuse will be examined. Treatments and prevention issues related to substance abuse will also be discussed.

PSYC 4352. PHYSIOLOGICAL PSYCHOLOGY
An introduction to the physiological mechanisms that underlie behavior with emphasis on the nervous, the endocrine and sensory systems.

PSYC 4354. SENSATION AND PERCEPTION
Basic sensory processes as they relate to the sensory experience and to the construction of our conception of physical reality.

PSYC 4357. GENDER ISSUES IN PSYCHOLOGY
This course is designed to introduce the undergraduate student to the theoretical and empirical issues related to the psychology of gender. Both traditional and contemporary theories that focus on the unique aspects in the psychological development of women as well as men will be examined. Prerequisite: 12 credits or previous psychology course work or the permission of the instructor are required for entrance into this course.

PSYC 4372. PSYCHOLOGICAL TESTING
Statistical and research basis for test construction. Instruction in use of group and individual tests in intelligence, achievement, interest and personality. Understanding of individual measures in these areas. Satisfies university computer literacy requirement. Prerequisite: MATH 1442 or its equivalent.

PSYC 4377. BUSINESS AND INDUSTRIAL PSYCHOLOGY
Psychological principles applied to the understanding of problems in business and industry. Topics include personnel psychology, organizational psychology, and effects of the work environment.

PSYC 4390. TOPICS IN PSYCHOLOGY
May be repeated for credit when topics vary.

PSYC 4395. UNDERGRADUATE RESEARCH
A research project in psychology designed in consultation with a faculty director. The study is to be conducted by the student under the supervision and direction of the faculty member and may culminate in a formal report written in APA journal style. Offered by application.

PSYC 4396. DIRECTED INDIVIDUAL STUDY
See College description. Offered by application.

PSYC 4398. APPLIED EXPERIENCE
See College description. Offered by application.

READING EDUCATION (READ) _______

READ 0399. BASIC READING AND COMPREHENSION
This is a reading course for students who need assistance in developing college level reading skills. Emphasis will be on improving reading comprehension, critical reasoning skills, recognition of the organization of ideas in written material, study skills and vocabulary development. The Higher Education Assessment (THEA) reading skills will be covered. Required for THEA liable undergraduate students. (Not counted toward graduation.) Course fee required.

READ 3320. PRINCIPLES AND PRACTICES OF READING INSTRUCTION, GRADES EC-6
This course will emphasize materials, methods, and beliefs for teaching reading in the early childhood through grade 6 setting. Components of the course will include comprehension strategies, vocabulary development, and word recognition knowledge as well as emergent literacy issues and strategies.

READ 3321. PRINCIPLES AND PRACTICES OF READING INSTRUCTION, GRADES 4 – 8
This course will emphasize materials, methods, and beliefs for teaching reading in grades 4-8. Components of the course will include reading-writing connections, comprehension strategies, vocabulary development, and word study.

READ 3351. DIAGNOSIS AND CORRECTION OF READING PROBLEMS
Diagnosis and correction of reading problems are examined in detail. Emphasis is upon the precise administration, scoring, and interpretation of various diagnostic instruments used to detect reading problems. The correction processes for identified problems are also examined. Prerequisite: READ 3320, READ 3321, or READ 3353.

READ 3352. CONTENT AREA READING FOR ELEMENTARY STUDENTS
Readings required of elementary pupils in the content areas are introduced. In addition, an overview of the reading processes, library skills and high interest, low vocabulary reading materials is presented. Prerequisite: READ 3320 or READ 3321.

READ 3353. CONTENT AREA READING FOR SECONDARY STUDENTS
The skills required of secondary students to deal with subject matter in the various content areas are presented. In addition, developmental and corrective processes that incorporate the identification and remediation of dyslexia and other reading disorders are presented.
Course Descriptions

READ 3355. 3 sem. hrs. 
TEACHING READING IN THE SECONDARY SCHOOL
This course focuses on planning, developing, selecting, and organizing reading materials for secondary reading instruction. Prerequisite: READ 3353.

READ 3356. 3 sem. hrs. 
TECHNOLOGY AND LITERACY
Various software packages that have been developed for providing initial and tutorial instruction in the language arts are presented. In addition, instructional techniques for using these packages are covered. Prerequisites: READ 3320 and READ 3321.

READ 4352. 3 sem. hrs. 
ADVANCED PRACTICES IN READING/ LANGUAGE ARTS
The emphasis is on instructional approaches supported by current theory and research and supervised implementation in a school setting. Attention is given to word study, comprehension, critical reading and reasoning, and reading-writing connections. This course must be taken concurrently with READ 4394. Prerequisites: READ 3320, READ 3351, or READ 4380.

READ 4380. 3 sem. hrs. 
CHILDREN’S AND ADOLESCENTS’ LITERATURE
Provides students with an understanding of children’s and adolescent literature. Included in the class is the reading and study of literature and how to promote reading of literature in the schools. Extensive reading is required.

READ 4394. 3 sem. hrs. 
FIELD EXPERIENCES IN READING
The culminating experience for those students working toward a specialization in reading. Students are provided supervised experience in field-based activities, in addition to on campus activities. Prerequisites: READ 3320, READ 3351, and READ 4380. This course must be taken concurrently with READ 4352.

READ 4696. 1 6 sem. hrs. 
DIRECTED INDIVIDUAL STUDY
Programs will be designed for individual cases through special permission of the Department Chair and Dean. May be repeated for credit when the topic varies.

SCIENCE, MATHEMATICS AND TECHNOLOGY EDUCATION (SMTE)_____
Weekly lecture and laboratory hours associated with each course are designated by (lecture:lab) following the semester hours.

SMTE 0091. 0 sem. hrs. 
LABORATORY SAFETY SEMINAR
A laboratory safety seminar required once of every student who enrolls in a laboratory course in the Departments of Physical and Environmental Sciences and Life Sciences. Attendance is required at one safety training session held at the beginning of each term unless the student enrolls in a web-based section. A non-credit course which laboratory students are may repeat.

SMTE 1350 (MATH 1350) 3 sem. hrs. (3:0) 
FUNDAMENTALS OF MATHEMATICS I
The conceptual framework for understanding and applying properties, models, and operations related to various number systems in problem solving settings. Materials fee required. Prerequisite: MATH 1314. Fall, Spring, Summer. (Formerly MATH 3301.)

SMTE 1351 (MATH 1351) 3 sem. hrs. (3:0) 
FUNDAMENTALS OF MATHEMATICS II
The conceptual framework for understanding and applying properties, models, and operations related to various data systems in problem solving settings. Materials fee required. Prerequisite: SMTE 1350. Fall, Spring, Summer. (Formerly MATH 3303.)

SMTE 3315. 3 sem. hrs. (2:2) 
FOUNDATIONAL APPROACHES TO THE PHYSICAL SCIENCES
Physical science topics such as simple machines, atoms, molecules, electricity and magnetism, sound, and light. Laboratory involvement will emphasize techniques of problem solving, data gathering, and data application. The course is taught following an inquiry based format and is recommended for future K-8 level science educators. (Formerly PSCI 3315.)

SMTE 3316. 3 sem. hrs. (2:2) 
FOUNDATIONAL APPROACHES TO THE LIFE SCIENCES
Emphasis on biological concepts including cells, plants, invertebrate and vertebrate structural systems. Laboratory investigations focus on techniques of problem solving, data gathering, and data applications. The course is taught following an inquiry based format and is recommended for future K-8 level science educators. (Formerly BIOL 3315.)

SMTE 3352. 3 sem. hrs. (3:0) 
FUNDAMENTALS OF MATHEMATICS III
The conceptual framework for understanding and applying properties, models, and operations related to various geometric systems in problem solving settings. Materials fee required. Prerequisite: SMTE 1351. Fall, Spring, Summer. (Formerly MATH 3302.)

SMTE 4217 2 sem hrs (2:0) 
SECONDARY APPROACHES TO THE LIFE SCIENCES
Study of secondary science teaching and learning from the standpoints of theory and practice, curriculum objectives, materials and evaluation. The course will emphasize contemporary issues by focusing on biological content ranging across the sub-disciplines of molecular biology, physiology, evolution and environmental science while teaching in a relevant and engaging context that includes web searches, laboratory activities, and student-centered inquiry activities.

SMTE 4270. 2 sem. hrs. (2:0) 
SCIENCE EDUCATION TOPICS I
Presentation of the conceptual framework for understanding and applying science content in life sciences including biology, ecology and evolution using the national standards for science education and Texas Essential Knowledge and Skills (TEKS). The course is taught using scientifically researched literature and content knowledge in an inquiry based format and is recommended for future 4-8 and 8-12 level science educators. (Formerly ESCI 4270.)
Course Descriptions

SMTE 4271. 2 sem. hrs. (2:0)
SCIENCE EDUCATION TOPICS II
Presentations of contemporary issues in science education. Topics include the science teacher as a community resource, linking classroom instruction with community resources, outdoor and environmental education programs, securing funding for K-12 science education. (Formerly ESCI 4271.)

SMTE 4273. 2 sem. hrs. (2:0)
HISTORICAL DEVELOPMENT OF THE SCIENCES
Study of human endeavors leading to the present body of scientific knowledge placed in a historical and philosophical context. Portions of the materials will be presented in a format conducive to adaptation for middle school and high school. Prerequisites: BIOL 1407, CHEM 1312, EDCI 3311 or approval of instructor.

SMTE 4320 3 sem. hrs. (2:3)
SECONDARY SCIENCE LABORATORY TECHNIQUES
This course is designed to assist the 4-8 and 8-12 future science teacher in developing content knowledge, skills and mastery of designated laboratory and research techniques through scientific experimentation in areas such as chemistry, biology and physics. State and national laboratory safety mandates will also be addressed. Prerequisites: BIOL 1407, CHEM 1312, EDCI 3311 or approval of instructor. (Formerly PSCI 4320 or BIOL 4420.)

SMTE 4370. 3 sem. hrs. (3:0)
MATHEMATICS EDUCATION TOPICS I
Presentations of contemporary issues in mathematics education. Topics include history of mathematics education, state and national standards for mathematics education, cognitive development, the importance of culture, language and gender in learning mathematics, authentic assessment, and interdisciplinary curriculum.

SMTE 4382. 3 sem. hrs. (3:0)
BASIC MATHEMATICS FROM AN ADVANCED VIEWPOINT
Capstone course for students pursuing grades 4-8 certification in mathematics. Presents basic mathematical concepts in the context of advanced mathematics courses. The course includes historical development of significant ideas in mathematics and science, interpretations of mathematical topics at multiple levels, and the use of technology to generate and convey understanding of mathematical ideas. Prerequisites: MATH 3311, MATH 3312, and completion of at least 90 hours. (Formerly MATH 4382.)

SMTE 4490. 1-4 sem. hrs.
SELECTED TOPICS
Subject materials variable. May be repeated for credit when topics are significantly different. Faculty approval required.

SMTE 4496. 1-4 sem. hrs.
DIRECTED INDEPENDENT STUDY
Requires a formal proposal of study to be completed in advance of registration and to be approved by the supervising faculty, the Chairperson, and the Dean of the College.

SOCIAL WORK (SOCW)

Social Work courses are offered for students planning to enter this vocation. These courses may be taken as electives in support of major study areas in the College.

SOCW 3301. 3 sem. hrs.
INTRODUCTION TO SOCIAL WORK
An introductory survey of the field of social work including the nature, function, and types of social work practice. This course is designed to acquaint the student with the history, terminology, scope, and values of the profession of social work. Prerequisite: PSYC 2301 or SOCI 1301 or permission of instructor.

SOCW 3310. 3 sem. hrs.
APPROACHES TO SOCIAL WELFARE
Origin, development, and present status of social service programs with particular emphasis on the relationship of program resources, human needs, and the methods through which services are provided.

SOCW 3320. 3 sem. hrs.
SOCIAL SERVICES IN THE COMMUNITY
An introduction to the organizations and agencies involved in social service delivery. Exploration of the range and characteristics of the human service delivery system with particular emphasis on the social work profession. Prerequisite: SOCW 3310 or permission of instructor.

SOCW 3330. 3 sem. hrs.
SOCIAL WORK PRACTICE
Social Work practice from a generalist perspective of social work intervention. Data collection, assessment, intervention, planning/implementation, and evaluation are covered. Prerequisite: SOCW 3301 or permission of instructor.

SOCW 4396. 1-3 sem. hrs.
DIRECTED INDIVIDUAL STUDY
See College description. Offered on application. Prerequisite: consent of instructor.

SOCW 4398. 3 sem. hrs.
APPLIED EXPERIENCE
One semester course of field work in a selected agency. (See college description. Offered on application.) Prerequisite: consent of instructor.

SOCIOLOGY (SOCI)

SOCI 1301 (SOCI 1301) 3 sem. hrs.
HUMAN SOCIETIES
Study of the development of human societies from hunting and gathering tribes to postindustrial and Third World types, using a macro ecological-evolutionary theoretical approach to societal organization in retrospect and prospect for the future. (This course satisfies the University core requirement in social science.) (Required for Majors) Offered every semester including summer session II.

SOCI 2326 (SOCI 2326/PSYC 2319) 3 sem. hrs.
SOCIAL PSYCHOLOGY
The scientific study of how a person’s thoughts and behavior are influenced by others. Topics will include social cognition, attitudes, persuasion, interpersonal relationships, and group behavior. (Credit may not be given for both this course and PSYC 2326.)

SOCI 3301. 3 sem. hrs.
CULTURAL ANTHROPOLOGY
Study of the social life of human groups from their earliest appearance to the present. Analyses of cultures include language, kinship, art, religion, economics, and political behavior. Cross-cultural comparisons allow development of generalizations about social patterns,
A systematic and critical study of the nature, patterns, and processes of violations of significant social norms by members of society. Specific attention is given to violations such as drug abuse, violence in and outside the family, and white-collar offenses.

SOCIOLOGY OF EDUCATION
Employing a sociological lens to examine formal education in the United States and other countries, students will explore various schools of thought and controversies surrounding education in modern societies. They will examine important issues related to formal education, such as the expansion of schooling, equality of educational opportunity, unequal achievement of groups of students, the reproduction of inequality in education, schools' roles in the transmission of culture, and the social organization of schools.

SOCIOLOGY OF EDUCATION

An ethnographic and historical analysis of Native American cultures in what is now called North America from prehistoric times to the present. (Credit may not be given for both this course and ANTH 3370.)

SOCIOLOGY OF ETHNIC AND RACIAL RELATIONS
The study of cultural, religious, ethnic and racial groups, and the treatment accorded them in society. Prejudice, discrimination and the outcomes of discrimination in relation to both dominant and subordinate groups are considered.

SOCIOLOGY OF POPULATION
A study of population growth, distribution and change, and the reasons for these patterns. Also an examination of population-related problems and policies. Offered Spring only.

SOCIOLOGY OF GENDER
An examination of the roots, nature and social construction of gender roles including socialization of men and women, gender role relationships from the perspectives of sociology. Issues of family, education, work and the economy, religion, politics and law, feminist organizations, feminist theory, and men’s and women’s movements will be considered.

SOCIOLOGY OF MEXICAN AMERICAN WOMEN
A study of the Chicanas and the trends in society and Mexican-American culture affecting their lives and behaviors.

SOCIOLOGY OF THE FAMILY
The study of the family, relationships among its members, and the relationship of family to other social institutions.

SOCIOLOGY OF DEVIANTE BEHAVIOR
A systematic and critical study of the nature, patterns, and processes of violations of significant social norms by members of society. Specific attention is given to violations such as drug abuse, violence in and outside the family, and white-collar offenses.

SOCIOLOGY OF EDUCATION

Employing a sociological lens to examine formal education in the United States and other countries, students will explore various schools of thought and controversies surrounding education in modern societies. They will examine important issues related to formal education, such as the expansion of schooling, equality of educational opportunity, unequal achievement of groups of students, the reproduction of inequality in education, schools’ roles in the transmission of culture, and the social organization of schools.

SOCIOLOGY OF NATIVE AMERICANS IN NORTH AMERICA
An ethnographic and historical analysis of Native American cultures in what is now called North America from prehistoric times to the present. (Credit may not be given for both this course and ANTH 3370.)

SOCIAL THEORY
Combines an analysis of the major ideas and theories in sociology and their relationship to social research with an understanding of social processes and structures. Prerequisite: SOCI 1301 or permission of instructor. (Required for Majors) Offered Spring only.

SOCIOLOGY OF WORK AND OCCUPATIONS
The study of work as a social phenomenon, including the social organization of work, occupations, and professions in society. The labor force, work culture, workers mobility, career lines, and leisure in contrast to work are considered.

SOCIAL CLASS AND INEQUALITY
The study of social inequality in society, with emphasis on the social class structure of the United States, its origins, development, and consequences for individuals, groups, and society. Prerequisite: SOCI 1301 or permission of instructor.

COMPLEX ORGANIZATIONS
The development of a theoretical and applied understanding of those social institutions where most of us will be employed. Topics include organizational effectiveness, decision making, designs, politics, cultures, as well as gender and racial inequality.

SOCIAL CHANGE AND MODERNIZATION
A study of how technology, culture, social movements, etc. affect large-scale change in societies.

SOCIOLOGY OF SPORTS
This course critically examines the relationships between organized sports and the rest of society. It will undertake a sociological analysis of how organized sports affect, and are affected by, major social institutions such as the economy, racial and gender relations, mass media, and religion, to mention but a few.

SOCIAL DELINQUENCY
Examination of the extent and pattern of juvenile crime today. History and theory of delinquency and society’s response to it. (Credit may not be given for both this course and CRIJ 4331.)

CRIMINOLOGY
An examination of the major sociological explanations for crime, criminal behavior, and the social responses to crime. (Credit may not be given for both this course and CRIJ 4335.)

GRAYING IN AMERICA: SOCIOLOGY OF RETIREMENT
This course critically examines the social context within which retirement behavior occurs in the United States. Topics will include sociological theories related to aging, factors influencing retirement, including race, class, and gender, as well as debates surrounding Social Security policy.
**SPANISH FOR NATIVE SPEAKERS**

SPAN 2313 (SPAN 2313) 3 sem. hrs.

This introductory course is designed for bilingual students who wish to enhance their linguistic skills (speaking, listening, reading and writing.) This course will focus on the cultural and historical aspects related to the native Spanish speaker.

**SPANISH COMPOSITION**

SPAN 3302. 3 sem. hrs.

A course designed to develop analytical perspectives in literary criticism and to strengthen reading and writing skills in Spanish through intensive reading of Spanish, Spanish American, and Chicano fiction. (Prerequisite: SPAN 2312 or equivalent.)

**SPANISH CONVERSATION**

SPAN 3303. 3 sem. hrs.

A course designed to strengthen the student’s oral proficiency in the language through selected readings, videos and oral presentations. Prerequisite: 2312 or equivalent.

**SPANISH CIVILIZATION**

SPAN 3304. 3 sem. hrs.

This course has been designed to provide a general overview of the historical, sociocultural and political experience of the Spanish people. Conducted in Spanish.

**SPANISH AMERICAN CIVILIZATION**

SPAN 3305. 3 sem. hrs.

This course has been designed to provide a general overview of the historical, sociocultural and political experience of the American people before and after Columbus. Conducted in Spanish.

**SPANISH LITERATURE I**

SPAN 3306. 3 sem. hrs.

A critical approach to the study of early Spanish literature from the Middle Ages through the Eighteenth Century. Literary selections include masterpieces that establish and reflect Spain’s literary tradition within its larger European context. This course may be used to satisfy the university core curriculum requirement in literature. Conducted in Spanish.

**SPANISH LITERATURE II**

SPAN 3307. 3 sem. hrs.

A continuation of a critical approach to the study of Spanish literature from the Nineteenth Century through the present. Representative works of Spanish Romanticism, Realism, Naturalism, and contemporary literature are studied within their larger European context. This course may be used to satisfy the university core curriculum requirement in literature. Conducted in Spanish.

**SPANISH AMERICAN LITERATURE I**

SPAN 3308. 3 sem. hrs.

A critical approach to the study of early Spanish American literature from the Pre-Columbian Period through the Nineteenth Century. Selected readings in all literary genres, major themes, writers, and early literary movements will be studied within their larger Latin American context. This course may be used to satisfy the university core curriculum requirement in literature. Conducted in Spanish.

**SPANISH AMERICAN LITERATURE II**

SPAN 3309. 3 sem. hrs.

A continuation of a critical approach to the study of Spanish American literature from the Twentieth Century through the present. Representative works of Latin American writers and literary movements: Modernism, Realism, Avant-Garde, Regionalism, Magic-Realism are studied...
within their larger Latin American context. This course may be used to satisfy the university core curriculum requirement in literature. Conducted in Spanish.

**SPAN 3311. SPANISH PHONOLOGY**
A course designed to study the production and discrimination of the Spanish sound system with a general overview of the geographical and social distribution of phonemic and allophonic variants.

**SPAN 3312. SPANISH GRAMMAR**
A course designed for Spanish majors to study language structures. Major emphasis will be given to Morphology and Syntax and their role in both oral and written expressions.

**SPAN 3315. CIVILIZATIONS OF THE SPANISH-SPEAKING WORLD**
This course has been designed to provide a general overview of the historical, sociocultural and political experience of peoples from the Spanish-Speaking world, both from Spain and Spanish America. Conducted in Spanish.

**SPAN 4301. SPANISH CIVIL WAR AND LITERATURE**
Significance of the Civil War for Spanish, European, and world history. Effect of war on literary and cultural life of the country and the response of writers from Spain and Latin America. Conducted in Spanish.

**SPAN 4302. MEXICAN NARRATIVE**
Examination of representative novels and short stories reflecting the emergence of a post-revolutionary society in Mexico. Conducted in Spanish.

**SPAN 4303. SPANISH IN THE SOUTHWEST**
Cultural and linguistic dimensions of Spanish dialects of the Southwestern United States, with special attention to Texas Spanish and its sociolinguistic perspectives in the bilingual community at large. (Prerequisites: SPAN 2312 or equivalent.)

**SPAN 4320. SPANISH IN THE AMERICAS**
A study of the Spanish that was brought to the Americas, its development, propagation and contact with native-American languages, and the sociocultural factors that have contributed to the linguistic variation in contemporary Spanish-speaking societies.

**SPAN 4327. METHODS IN FOREIGN LANGUAGE INSTRUCTION**
This course is designed to study the current methods in foreign languages, their application in maximizing language proficiency, and the role of the students’ culture and language during the learning process.

**SPAN 4390 TOPICS IN SPANISH**
Study of specialized topics in language or literature. These courses may also be designed to develop terminology and overall Spanish proficiency regarding specific professions: Business, Medical, Criminal Justice, Sociology, etc. May be repeated when topics vary.

**DIRECTED INDIVIDUAL STUDY**
See College description. Offered on application.

**SPECIAL EDUCATION (SPED)**

**SPED 4310. THE EXCEPTIONAL CHILD**
Familiarizes the student with the various conditions of individuals with disabilities.

**SPED 4315. MOTOR DEVELOPMENT FOR CHILDREN WITH SPECIAL NEEDS**
A comparative overview of the physical development and motor-activity needs of children with disabilities.

**SPED 4320. COMMUNITY-BASED INSTRUCTION FOR THE EXCEPTIONAL CHILD**
Strategies and procedures for teaching community-based instruction to individuals with disabilities, including independent living and socialization skills, are discussed.

**SPED 4325. TEACHING STRATEGIES FOR EXCEPTIONAL CHILDREN**
Introduction and demonstration of specific skills necessary for teaching the exceptional child.

**SPED 4330. INDIVIDUALIZED PROGRAMS FOR EXCEPTIONAL CHILDREN**
Emphasis is given to the design and implementation of individualized educational programs (IEP) for exceptional children.

**SPED 4335. APPLIED LEARNING THEORY**
Designed to develop and extend the student’s knowledge of the principles of applied learning theory as it relates to students with disabilities.

**SPED 4397. SPECIAL EDUCATION PRACTICUM**
Provides the student with the opportunity to interact with exceptional children in a variety of settings ranging from non-involved observer to active participant. Grade assigned will be “credit” (CR) or “no credit” (NC.)

**SPED 4398. ADVANCED SPECIAL EDUCATION PRACTICUM**
Participation in various community centers, schools and programs. Students will be involved in the learning situation. Grade assigned will be “credit” (CR) or “no credit” (NC.)

**SPED 4696. DIRECTED INDIVIDUAL STUDY**
Programs will be designed for individual cases through special permission of the Department Chair and Dean. May be repeated for credit when the topic varies.

**THEATRE (THEA)**

**THEA 1100 (DRAM 1120) 1 sem. hr.**

**THEATRE PRODUCTION LAB I**
Opportunity to participate in theatre productions in the areas of costume construction and stage makeup. Students are required to work on crews for the University Theatre productions. The course may be repeated for credit.

**THEA 1101 (DRAM 1121) 1 sem. hr.**

**THEATRE PRODUCTION LAB II**
Opportunity to participate in theatre productions in the areas of set construction, lighting, sound, and stagecraft.
Students are required to work on crews for the University Theatre productions. The course may be repeated for credit.

THEA 1310 (DRAM 1310) 3 sem. hrs.  
THE ART OF THE THEATRE  
Introduction to the theatre as an art form. Includes exploration of the creative process from the perspective of the playwright, director, actor, and designer. Meets Fine Arts requirements for the University Core Curriculum Program.

THEA 1341 (DRAM 1341) 3 sem. hrs.  
STAGE MAKEUP  
A practical exploration of basic stage makeup techniques. The student will also investigate the relationships of character to makeup and begin to understand the work needed to design makeup for a production.

THEA 1342 (SPCH 1342) 3 sem. hrs.  
VOICE AND DICTION  
Basic voice training, including techniques for vocal production, manipulation, and control. Practical application of the vocal apparatus will be emphasized, including techniques of pronunciation, projection, articulation, and the use of the International Phonetic Alphabet. (Credit may not be given for both this course and COMM 1342.)

THEA 1351 (DRAM 1351) 3 sem. hrs.  
ACTING I  
The development of basic skills and techniques of acting, including sensory awareness, ensemble performing, character analysis, and script analysis. Emphasis on the mechanics of voice, body, emotion, and analysis as tools for the actor.

THEA 1352 (DRAM 1352) 3 sem. hrs.  
ACTING II  
A continuation of Acting I with emphasis on characterization and working with extended realism. The student will study the theories of Constantin Stanislavski. Prerequisite: THEA 1351.

THEA 1371 (DRAM 1342) 3 sem. hrs.  
COSTUME CONSTRUCTION  
A beginning overview of the vocabulary and basic sewing methods of theatrical costuming. Co-requisite THEA 1100.

THEA 2100 (DRAM 2120) 1 sem. hr.  
THEATRE PRODUCTION LAB III  
One semester hour of credit may be received per semester for work done in the practical lab consisting of actual work on productions. One hour a week for one semester and additional laboratory hours as required.

THEA 2101 (DRAM 2121) 1 sem. hr.  
THEATRE PRODUCTION LAB IV  
One semester hour of credit may be received per semester for work done in the practical lab consisting of actual work on productions. One hour a week for one semester and additional laboratory hours as required.

THEA 2370. 3 sem. hrs.  
THEATRE STAGECRAFT  
Students will study the principles of stagecraft, and be provided hands on experiences in set construction, painting, lighting, sound and other techniques. Students will also utilize the computer to facilitate designs and projects for this course. Co-requisite THEA 11101.

THEA 3100  
THEATRE PRODUCTION LAB V  
One semester hour of credit may be received per semester for work done in the practical lab consisting of actual work on productions. One hour a week for one semester and additional laboratory hours as required.

THEA 3101  
THEATRE PRODUCTION LAB VI  
One semester hour of credit may be received per semester for work done in the practical lab consisting of actual work on productions. One hour a week for one semester and additional laboratory hours as required.

THEA 3165. 1 sem. hr.  
THE DESIGN AND TECHNICAL PORTFOLIO  
A basic course in the development of the student portfolio for the areas of design and technology with emphasis in the theatrical job market or graduate school.

THEA 3300. 3 sem. hrs.  
MOVEMENT FOR ACTORS  
Explores the movement skills necessary for the actor with emphasis on individual physical training and improvisation. Prerequisites: THEA 1351, THEA 1352.

THEA 3301. 3 sem. hrs.  
THEATRE FOR YOUTH  
This course will present the student with a historical and theoretical basis for children’s theatre as well as presenting the student with classroom strategies and methodologies. Designed to serve three specific student populations: the theatre major, children’s theatre minor, and the elementary, middle, and high school education minor. The course will enable theatre majors to broaden their appeal in a professional job market and will allow the education major to adhere to the Texas essential skills in theatre minimum guidelines.

THEA 3302. 3 sem. hrs.  
CREATIVE DRAMATICS  
Theories and practices incorporating the techniques of creative drama in the elementary classroom. Especially recommended for elementary education, recreation, and the social sciences.

THEA 3303. 3 sem. hrs.  
THEATRE IN THE PUBLIC SCHOOLS  
Theories and practices of incorporating theatre activities in the public schools. Especially recommended to students of elementary and secondary education, recreation and the social sciences.

THEA 3310. 3 sem. hrs.  
CONTEMPORARY THEATRE  
An overview of the nature and function of theatre in our contemporary society with discussion of representative plays and playwrights, theatrical styles, and avant-garde theatre. Students will explore multicultural, political, and experimental themes, attend theatrical productions, and meet with actors, designers, and directors to discuss contemporary practices.

THEA 3311. 3 sem. hrs.  
SCRIPT ANALYSIS  
Students will learn the principles, techniques, and processes of dramatic structure found in written scripts as seen through the perception of the stage director, actor, and designer. A written intensive analysis of each script studied during the semester will be required. Focus will be on the theories of Aristotle and Eugene Scribe’s “Well Made Play Formula”. Prerequisites: THEA 1352, THEA 2370.
THEA 3340. AUDITION PREPARATION 3 sem. hrs.
Provides the student with the information and skills needed for auditioning in both professional and educational theatre. Prerequisites: THEA 1351, THEA 1352.

THEA 3350. PRODUCTION MANAGEMENT 3 sem. hrs.
This course is a survey of stage management and theatre administration. Topics to be studied include stage management, production management, professional unions, publicity/marketing, box office and house management. Prerequisites: THEA 1371, THEA 3311, THEA 2370.

THEA 3370. HISTORY OF THE THEATRE I 3 sem. hrs.
Historical investigation of the nature and function of theatre from primitive rituals through the Renaissance periods with discussions of representative plays/playwrights, theatrical styles and stage design. Prerequisite: THEA 3311.

THEA 3371. HISTORY OF THE THEATRE II 3 sem. hrs.
Historical investigation of theatre from the Restoration era to the present. Focus on the nature and function as well as the critical analysis of theatre and design, various movements, and influential people. Prerequisite: THEA 3311.

THEA 3373. PRINCIPLES OF DESIGN 3 sem. hrs.
Builds upon the student’s practical lab experience and understanding of theatrical design begun in costume construction and theatre stagecraft. Students will explore the creative process of theatre production as it pertains to lighting, set, sound, props, and costume design projects. Prerequisite: THEA 1371, THEA 2370.

THEA 3375. ACTING III: PERIOD STYLES 3 sem. hrs.
Specific training for actors in period plays. Emphasis on training the actor for the Classical, Renaissance, Shakespearean, and Modern Periods. Prerequisites: THEA 1351, THEA 1352.

THEA 3380. HISTORY OF THEATRICAL STYLES 3 sem. hrs.
A survey and research-oriented course which studies the major impact of the visual, artistic, historical, and social period movements. The course will focus on the approach that the actor, designer, director, and playwright take in developing the understanding of the environment of a play’s location and time period. Prerequisite: Approval of Instructor.

THEA 3381. DRAWING AND RENDERING FOR THE STAGE 3 sem. hrs.
Examination of the uses of the various materials used and the development of the techniques employed in the creation and presentation of theatrical renderings and models. Prerequisite: Approval of Instructor.

THEA 3382. DRAFTING AND COMPUTER-AIDED DESIGN FOR THE STAGE 3 sem. hrs.
Practical examination and practice in theatrical drafting conventions with an emphasis on the development of hand drafting techniques and CAD (computer-aided design.) Prerequisite: THEA 2370.

THEA 3385. MUSICAL THEATRE 3 sem. hrs.
The student will receive practical experience in musical theatre performance. The focus of the course is on history, audition techniques, characterization, staging, and choreography.

THEA 4100. SENIOR SEMINAR 1 sem hr.
A seminar class for the graduating senior. The student will be given the opportunity to address individual weaknesses and strengths in preparation for graduate school or entering the job market.

THEA 4200. SENIOR CAPSTONE 2 sem. hrs.
The course is designed to provide the graduating senior an opportunity to complete a final project in the acting/directing or design/tech focus areas. The student’s project will be juried by the entire faculty and include a research and production component.

THEA 4313. THEATRE TECHNOLOGIES 3 sem. hrs.
Designed to provide a forum for intensive study of a particular aspect of modern theatrical technologies. Various topics may be selected based on current industry trends, student needs and available resources. Prerequisites: THEA 2370, THEA 3381, THEA 3382.

THEA 4314. COLLABORATIVE APPROACHES TO DESIGN 3 sem. hrs.
An advanced design course where the student will examine the process of design from the standpoint of the relationship created within the design team. Through class projects, the student will participate in a design process which fosters communication of ideas, written analysis and collaboration in pursuit of a unified design in all aspects of production. Prerequisite: THEA 3373.

THEA 4323. ORAL INTERPRETATION OF CHILDREN’S LITERATURE 3 sem. hrs.
A study, primarily through the medium of performance, of various types and forms of literature for children. Strongly oriented toward teaching literature in the elementary school classroom. (Credit may not be given for both this course and COMM 4323 or ENGL 4370.)

THEA 4333. TECHNICAL DIRECTION 3 sem. hrs.
An advanced technical class geared for the student who wishes to receive training and employment as a technical director. Prerequisite: Approval of Instructor.

THEA 4360. STAGE DIRECTION I 3 sem. hrs.
The study and practical application of directing principals for the beginning director. Elements of script analysis, blocking, movement, character development, tempo, and design will be investigated as part of the directing process. The student will direct a ten-minute play for public performance. Prerequisite: THEA 1352, THEA 3311.

THEA 4361. STAGE DIRECTION II 3 sem. hrs.
An advanced study in directing with actual experience in organization, interpretation, casting, and producing the one-act play. The student will direct a one-act play for public performance. Prerequisite: THEA 4360.
THEA 4365. 3 sem. hrs.  
COSTUME DESIGN  
A study of the theory and practice of costume design utilizing the human form as a design element for the stage. Encompasses theatre form, style, and drafting and drawing techniques. Students are required to work on University Theatre productions as part of this course.

THEA 4370. 3 sem. hrs.  
SET DESIGN  
A study of the theory and practice of set design. Students will learn the fundamentals of theatre design and will apply this knowledge to projects. Projects will encompass theatre form, style, and concept utilization. Students are required to work on University Theatre productions as a part of this course. Satisfies university computer literacy requirement.

THEA 4371. 3 sem. hrs.  
ACTING FOR THE CAMERA  
Emphasizes the practice of various acting styles for television, video, and film. The student will receive practical experience in commercial styles, public service announcements, television and video style acting, and film scene study. (Credit may not be given for both this course and COMM 4371.)

THEA 4372. 3 sem. hrs.  
THEATRE PRACTICUM  
Advanced practice and participation in set construction, lighting implementation, and stagewear. Students will build upon skills in the areas of theatre production and design for production in the University Theatre. Class meets twice weekly with additional crew/lab work requirements as well. Students are required to work on University Theatre productions as a part of this course. May be repeated twice for credit.

THEA 4375. 3 sem. hrs.  
LIGHTING DESIGN  
A study of the theory and practice of lighting design. Practical experiences in University Theatre are included to provide exposure to the total design and implementation of lighting design. Students will become familiar with the techniques and aesthetics of lighting theatrical performances and will apply skills to create designs for projects and actual plays. Students are required to work on University Theatre productions as a part of this course. Satisfies university computer literacy requirement.

THEA 4380. 3 sem. hrs.  
ADVANCED STAGE MAKEUP  
A study of the theory and practice of designing makeup for the stage. Students will learn about a esthetics, application, and techniques of stage makeup. Students will do makeup designs as projects in the class. Students are required to work on University Theatre productions as part of this course.

THEA 4384. 1-3 sem. hrs.  
THEATRE PRODUCTION  
An applied production experience in which students perform in a play, work back stage or on a stage crew, or learn to design a play or musical from conception to final production. Students enrolling in the course but not cast in the shows will work backstage (technical production) or in another production capacity. Enrollment is by application only, and must be approved by the instructor in advance of registration. As part of the application process the number of credit hours will be determined by the instructor. May be repeated for credit.

THEA 4390. 1-3 sem. hrs.  
TOPICS IN THEATRE  
Study of specialized topics and themes in the areas of acting, directing, and theatre history. May be repeated when topics vary.

THEA 4396. 1-3 sem. hrs.  
DIRECTED INDIVIDUAL STUDY  
See College description. By application. Prerequisite: Approval of Instructor.

THEA 4398. 3 sem. hrs.  
APPLIED EXPERIENCE  
See College description. By application. Prerequisite: Approval of Instructor.

UNIVERSITY CORE CURRICULUM PROGRAMS (UCCP)_____________________

UCCP 1101. 1 sem. hr.  
FIRST-YEAR SEMINAR I.  
Interdisciplinary discussion of topics presented in the first-year Triad/Tetrad in which the student is concurrently enrolled. Required of full-time first-year students; to be taken as a component of the student’s first Triad or Tetrad.

UCCP 1102. 1 sem. hr.  
FIRST-YEAR SEMINAR II.  
Continuation of UCCP 1101. Interdisciplinary discussion of topics presented in the first-year Triad/Tetrad in which the student is currently enrolled and use of bibliographic resources for research. Required of full-time first-year students; to be taken as a component of the student’s second Triad or Tetrad.

WOMEN AND GENDER STUDIES (WGST)_________________

WGST 3301. 3 sem. hrs.  
INTRODUCTION TO WOMEN AND GENDER STUDIES  
An introduction to the study of women and gender across disciplines and cultures. Designed to engage students in some of the most important methodological and theoretical debates regarding women’s experiences and the construction of knowledge about women historically and today. Literary, anthropological, sociological, historical, scientific, and managerial perspectives may be included.

WGST 4380. 3 sem. hrs.  
SENIOR SEMINAR IN WOMEN AND GENDER STUDIES  
This seminar explores the relationship between theory and application in the field of women and gender studies. This includes the study of feminist theories and methodologies with special attention to the application of these to current debates and social issues. In addition, students must complete a research paper or applied experience project that is relevant for their major field of study.