COURSE DESCRIPTIONS

ACCOUNTING COURSES (ACT)

ACT 2291 Principles of Accounting I (3)
Modern financial accounting theory and practices applied to sole proprietorships, partnerships, and corporations. Accounting majors must complete this course with a grade of C or better.

ACT 2292 Principles of Accounting II (3)
Modern financial and managerial accounting theory and practices applied to an organization's liabilities, cash flows, planning, budgeting, and control. Accounting majors must complete this course with a grade of C or better. *Prerequisite: ACT 2291.*

ACT 3391 Intermediate Accounting I (3)
Theory and applications of assets, liabilities, and owners' equity, revenues, expenses, and analytical process. Accounting majors must complete this course with a grade of C or better. *Prerequisite: ACT 2292.*

ACT 3392 Intermediate Accounting II (3)
Theory and applications of assets, liabilities, and owners' equity, pensions, leases, earnings per share, and analytical process. Accounting majors must complete this course with a grade of C or better. *Prerequisite: ACT 3391.*

ACT 3394 Governmental Accounting (3)
Analysis of governmental and not-for-profit accounting issues including the preparation and use of budgets, records and statements. Accounting majors must complete this course with a grade of C or better. *Prerequisite: ACT 2292.*

ACT 3395 Managerial/Cost Accounting I (3)
An analysis of issues dealing with cost accounting and cost management in the global economy from the viewpoint of management, including calculating product costs and period expenses, cost systems for accumulating and managing costs, analyzing cost behavior for tactical decisions, introduction to activity-based costing, ethical principles for management accountants, measuring the costs of quality, and preparing the master budget. Accounting majors must complete this course with a grade of C or better. *Prerequisite: ACT 2292.*

ACT 3396 Accounting Information Systems (3)
Principles underlying establishment of complete accounting systems; applications to typical business organization; emphasis on the functions of control and protection. Accounting majors must complete this course with a grade of C or better. *Prerequisite: ACT 2292.*

ACT 4435 International Accounting (3)
An overview of emerging issues related to international accounting and reporting of financial information across national boundaries. The course will address topics such as accounting and auditing standards, disclosure practices, and financial reporting in a global business environment. Accounting majors must complete this course with a grade of C or better. *Prerequisite: ACT 3392.*

ACT 4491 Advanced Accounting (3)
An analysis of the theory and applications of accounting for business combinations, partnerships, and foreign currency transactions and translations. Accounting majors must complete this course with a grade of C or better. *Prerequisite: ACT 3392.*

ACT 4492 Guided Independent Research (1-3 credit hours per course per semester.)
Additional information is indexed under Guided Independent Research and Study. Note: This course may not be substituted for any required course.

ACT 4493 Guided Independent Study (1-3 credit hours per course per semester)
Additional information is indexed under Guided Independent Research and Study. Note: This course may not be substituted for any required course. Also see index for Independent Study and Research. Consult Certified Public Accountant Examination requirements prior to enrolling in this course. Accounting majors must complete this course with a grade of C or better.

ACT 4494 Income Tax Accounting I (3)
Analysis of the federal income tax laws and regulations for individual taxpayers. Primary emphasis is on the individual components of personal and business income and the allowable deductions. The taxation of gains and losses on property and capital-asset transactions will be introduced. Accounting majors must complete this course with a grade of C or better. *Prerequisite: ACT 2292.*

ACT 4495 Income Tax Accounting II (3)
Analysis of federal income tax laws and regulations for partnerships, corporations, estates and fiduciaries. Accounting majors must complete this course with a grade of C or better. *Prerequisite: ACT 4494.*

ACT 4496 Managerial/Cost Accounting II (3)
In depth analysis of advanced cost accounting issues from the viewpoint of management, including cost management systems, target costing, life cycle costing, and measures of performance, including the balanced scorecard. Accounting majors must complete this course with a grade of C or better. *Prerequisite: ACT 3395.*

ACT 4497 Auditing (3)
Auditing theory as contained in official pronouncements. Emphasis will be placed on material required for the CPA exam as it relates to professional ethics, audit engagement, internal control, audit sampling, evidence gathering and auditors' reports. Accounting majors must complete this course with a grade of C or better. *Prerequisite: ACT 3392.*

ACT 4498 Fraud Examination—Advanced Auditing (3)
Auditing theory and procedures as applied to fraud prevention, detection and investigation. Accounting majors must complete this course with a grade of C or better. Accounting majors must complete this course with a grade of C or better. *Prerequisite: ACT 4497.*

ACT 4499 Accounting Internship (1-3 credit hours per course per semester)
Internship in local, regional or national firm. Requires junior or senior standing and individual approval for the internship program. See "Internship Program" for additional requirements. Accounting majors must complete this course with a grade of C or better.

ANTHROPOLOGY COURSES (ANT)

ANT 2200 Anthropology (3)
An examination of human, physical and cultural development using evidence from archaeology, paleontology, genetics, ecology, cultural anthropology and linguistics with emphasis on the historical, structural and symbolic aspects of human culture. *This course is prerequisite for all 3300 and 4400 level courses in anthropology. This course does not count toward the 36-hour major.*

ANT 3305 Introduction to Archaeology (3)
An examination of the methods and theory of traditional and contemporary approaches to archaeological research.

ANT 3310 Cultural Anthropology (3)
An anthropological examination of human cultural development and a survey of both contemporary and past human cultures. May be taken for sociology credit.

ANT 3311 Physical Anthropology (3)
An examination of human biological development from the beginning of mankind through the Pleistocene age using evidence from archaeology, paleontology, biology, genetics and osteology.

ANT 3312 Field Techniques in Archaeology (3)
Instruction in survey and excavation methods and techniques used in the discipline of archaeology.

ANT 3313 Laboratory Techniques in Archaeology (3)
Instruction in the methods and techniques used in the curation and analysis of cultural materials recovered from archaeological investigations.

ANT 3320 Prehistory of North American Indians (3)
An examination of the aboriginal cultures of North American prior to the period of European contact based upon archaeological evidence.

ANT 3321 North American Indians Since Contact (3)
An examination of aboriginal cultures of North America from the period of European exploration, colonization, and settlement to the present using archaeological, ethnographic, and ethnological studies.

ANT 3325 Selected Topics in Anthropology (3)
Anthropological examination of a designated topic of special and/or current interest and importance that is generally not covered in regularly offered courses in the department.

ANT 3330 Historical Archaeology (3)
An examination of the historical research methods and archaeological techniques used to investigate and interpret archaeological sites dating from the historic period.

ANT 3340 Language in Culture and Society (3-3)
A sociological and anthropological examination of language from a descriptive, historical and social perspective.

ANT 3360 Magic, Witchcraft and Religion (3)
An anthropological examination of the role of religion and the supernatural among traditional peoples.

ANT 3370 Native American Religions (3)
An introduction to Native American religions. Focused on basic concepts of Native religions, the course familiarizes students with various aspects of religion and world views drastically different from their own. Special attention is paid to religious movements among Native groups which resulted from contact with Europeans and Africans.

ANT 4400 Southeastern Archaeology (3)
An in-depth study of the history of archaeology in the southeastern United States and the prehistoric and early historic cultures that inhabited the region for the last 12,000 years.

ANT 4401 Native American Cultures of the Southwestern U.S. (3)
An anthropological examination of the prehistory and early history of the southwestern U. S. native cultures. Includes classroom lecture and on-site observation.

ANT 4410 High Civilizations of the Old World (3)
An anthropological examination of the sociocultural systems that formed the foundations of preindustrial high civilizations of the Old World and a survey of past cultures that achieved this degree of development.

ANT 4411 High Civilizations of the New World (3)
An anthropological examination of the sociocultural systems that formed the foundations of preindustrial high civilizations of the New World and a survey of past cultures that achieved this degree of development.

ANT 4420 Forensic Osteolgy (3)
A survey of the methods used in recovering human osteological remains from field sites. It includes methods used in identifying, preserving, and recording data from human osteological remains, and the methods used in determining the cause of death, age, sex, race, and stature of individuals from human osteological remains.

ANT 4491-4492 Guided Independent Research (1 to 3 credit hours per course per semester)
Undergraduate research with attention to critical evaluation of research techniques, methods and procedures. *Prerequisites: Junior or senior standing with a minimum overall GPA of 3.0, permission of guiding professor, approval of department chair or dean. A written request is to be submitted to the department chair at least two weeks in advance of the term in which the study is to be undertaken. May not be used to repeat a course for which a grade of D or below has been earned. Application forms are available in the office of University Records. Guided independent research may be taken only in the applicant's major or minor field. Also see index for "Independent Study and Research."*

ANT 4493-4494 Guided Independent Study (1 to 3 credit hours per course per semester)
Supervised study through field and laboratory projects, guided readings, creative endeavors or achievement of specific skills. *Prerequisites: Junior or senior standing, with a minimum overall GPA of 3.0, permission of guiding professor, approval of department chair or dean. A written request is to be submitted to the department chairperson at least two weeks in advance of the term in which the study is to be undertaken. May not be used to repeat a course for which a grade of D or below has been earned. Application forms are available in the office of University Records. Guided independent research may be taken only in the applicant's major or minor field. Also see index for "Independent Study and Research."*

ARABIC COURSES (ARB)

ARB 1101 Introductory Arabic I (3-3)
Introduction to the Modern Standard Arabic language.

ARB 1102 Introductory Arabic II (3-3)
Introduction to the Modern Standard Arabic language. *Prerequisite: ARB 1101 or permission of instructor.*

ARB 2201 Intermediate Arabic I (3-3)
Progressive development of basic language skills in Arabic. *Prerequisite: ARB 1102 or permission of instructor.*

ARB 2202 Intermediate Arabic II (3-3)
Progressive development of basic language skills in Arabic. *Prerequisite: ARB 2201 or permission of instructor.*

ART AND DESIGN COURSES (ART)

ART 1133 Visual Arts (2-2)
Visual arts and their relationship to human needs and aspirations. *NOTE: Credit for this course may not be applied toward any program in art.*

ART 1134 Honors Visual Arts (2-2)
Visual arts and their relationship to human needs and aspirations. Presentation of aesthetic, cultural and social issues related to art and its making. *NOTE: Credit for this course may not be applied toward any program in art.*

ART 1145 Foundations of Form and Space (3-3)
Introduction to the principles, elements, and concepts of two-dimensional space.

ART 1150 Foundations of Time and Space (3-3)
Introduction to the principles, elements, and concepts of three- and four-dimensional space.

ART 2201 Introductory Drawing (3-3)
Introduction to drawing with emphasis on traditional rendering materials and techniques.

ART 2202 2D Studio I (3-3)
Fundamental concepts in printmaking. Basic techniques in producing black and white multiples in relief, intaglio, serigraphy and lithography. *Prerequisites: ART 1145, ART 2201 or ART 2210, and ART 2230.*

ART 2204 3D Studio I (3-3)
Fundamental concepts in pottery and ceramics. Basic techniques in production and free form ceramics to include introduction to hand-building, wheel throwing, and glazing/firing techniques. *Prerequisites: ART 1145, AR T2201 or ART 2210, and ART 2230.*

ART 2205 3D Studio II (3-3)
Fundamental concepts in sculpture. Emphasis on traditional subtractive and additive techniques in a variety of media. *Prerequisites: ART 1145, ART 2201 or ART 2210, and ART 2230.*

ART 2206 2D Studio II (3-3)
Fundamental concepts in painting. Basic techniques in application using transparent and opaque painting media. *Prerequisites: ART 1145, ART 2201 or ART 2210, and ART 2230.*

ART 2210 **e-Drawing (3-3)**
Introduction to drawing with emphasis on developing rendering skills applied to digital technology.

ART 2228 **Photo Studio I (3-3)**
Introduction to the fundamentals of black and white darkroom photography.

ART 2230 **Color and Technology (3-3)**
Introduction to the principles and science of color and color applications in both colorant and digital environments.

ART 2250 **Survey of Art History I (3-3)**
Survey of the history of art from antiquity through the Gothic period.

ART 2251 **Survey of Art History II (3-3)**
Survey of the history of art from Renaissance through Realism.

ART 3301 **Life Drawing (3-3)**
Drawing the human form with emphasis on rendering mood and expression while learning skeletal and muscular structure. *May be repeated up to two times for credit (9 hours maximum). Prerequisite: ART 2201 or ART 2210.*

ART 3302 **History of the Arts (3)**
An analysis of examples of art from diverse periods with an emphasis on trends and patterns and the interactions of art with various aspects of social, political, and intellectual developments.

ART 3308 **<<dti>> Principles of Digital Design (3-3)**
Introduction to the fundamental principles of graphic design using a variety of desktop software including writing HTML. *Prerequisites: ART 1145, ART 2201 or ART 2210, and ART 2230.*

ART 3310 **<<dti>> Time/Sound (3-3)**
Exploration of graphic design applied to multimedia. Students will learn to produce presentations using type, imagery, and audio-visuals. *Prerequisite: ART 3308.*

ART 3315 **<<dti>> Design for the Internet (3-3)**
Formal and practical aspects of graphic design as applied to web development, Internet communication, marketing, and advertising. *Prerequisite: ART 3308.*

ART 3318 **Conceptual Drawing (3)**
A course in the exploration of image making that expands drawing from direct observation to a more conceptual approach. May be repeated for credit up to nine hours. *Prerequisites: ART 1145, 2201.*

ART 3320 **Ancient and Medieval Art (3-3)**
Classical antiquity through the Gothic period.

ART 3321 **Renaissance and Baroque (3-3)**
Northern and Southern Renaissance through the Baroque period.

ART 3322 **18th and 19th Century Art (3-3)**
Classical, Realism, Romanticism, and Impressionism.

ART 3323 **20th Century Art (3-3)**
Post-Impressionism to the present.

ART 3324 **<<dti>> Paper/Screen (3-3)**
Exploration of desktop and web-based publishing. Production of content, research, imagery, and development of paper and web-based publications. *Prerequisite: ART 3308 or permission of department chairman.*

ART 3328 **Photo Studio II (3-3)**
Exploration of technical and artistic aspects of color photography. Concentration on color slide/transparency photography as a source of images for such markets as magazines, advertising, books, and a variety of other publications. *Prerequisite: ART 2228.*

ART 3330 **2D Studio III (3-3)**
Advanced concepts in two-dimensional media. Studio/seminar focusing on specific painting, printmaking, drawing, and mixed media techniques. *Prerequisites: ART 2202 and ART 2206.*

ART 3331 **3D Studio III (3-3)**
Advanced concepts in three-dimensional media. Studio/seminar focusing on specific additive and subtractive techniques in a variety of media. *Prerequisites: ART 2204 and ART 2205.*

ART 3346 **Educational Assessment in Fine Arts (3-3)**
This course provides a broad foundation in all aspects of assessment as it is applied to the P-12 music and art classroom, from learning theory to practical application of assessment techniques, data management, critical thinking, progress reporting and portfolio building. Assessment task design in the artistic response modes is covered, and a series of assessments that can be implemented in the music/art classroom are developed. *Prerequisite: Admission to TEP.*

ART 3348 **Photo Studio III (3-3)**
Exploration of lighting, backgrounds, color harmony, composition, and other aspects of studio photography. Film and digital means utilized for capturing images. *Prerequisite: ART 3328*

ART 3350 **Research and Criticism (3-3)**
Exploration of modern and postmodern art in the 20th century with emphasis on research, analysis, and writing about issues, artists, art forms, and movements in art.

ART 3355 Graphic Design History (3-3)
Survey of the history of graphic design from prehistoric visual communications to contemporary global issues.

ART 3361 Integrating Art into the Curriculum (3-3)
Critical and experiential investigation of approaches for integrating visual art into the elementary curriculum. *Prerequisite: EDU 3310 and PSY 3303.*

ART 3375 Special Topics in Art/Design (3-3)
Examination of selected topics in art and design not included in the established curriculum. Content may be of a historical, thematic, or technological nature. May be repeated for credit.

ART 3380 Travel Study in Art/Photography (3-3)
Supervised investigation of photography and other art media through travel abroad or within the interior of United States. May be repeated for credit.

ART 4424 <<dti>> Design Studio (3-3)
In-depth graphic design studio/lab working with actual clients and producing design solutions for industry. Student must demonstrate proficiency with digital technology systems and have a portfolio design. *Prerequisite: ART 3324 or permission from the department chairman.*

ART 4428 Photo Studio IV (3-3)
Advanced projects in photography. Collaboration with clients, designers, writers and others in the development of photographic solutions. *Prerequisite: ART 2228.*

ART 4430 2D Studio IV (3-3)
Content and issues in two-dimensional media. Studio/seminar experiences focusing on the development of personal artistic expression. *Prerequisite: ART 3330.*

ART 4431 3D Studio IV (3-3)
Content and issues in three-dimensional media. Studio/seminar experiences focusing on the development of personal artistic expression. *Prerequisite: ART 3331.*

ART 4435 Collaborative Studio (3-3)
An integrative art studio experience joining students from each concentration area. Thematic, supervised exploration of a chosen medium. May be repeated up to two times for credit (9 hours maximum.) *Prerequisite: Must have completed the third level of an art studio concentration or have approval of department chair.*

ART 4472 Internship in Art Education (9)
The Professional Internship Program is the culminating clinical field-based experience for students seeking certification in a teaching field. The Professional Internship Program provides the student with the opportunity to conduct classes and assume the role of a teacher while receiving supervision from a classroom teacher and a university supervisor for a period of one full semester. The student will demonstrate skills of the informed, reflective decision maker throughout the internship experience. *Prerequisite: Admission to TEP; Corequisite: IED 4454 Internship Seminar for Interdisciplinary Education.*

ART 4481 Methods and Materials for the Art Teacher (3-3)
Teaching methods, selection, organization, and use of art materials. *Prerequisite: ART 3361 and admission to TEP.*

ART 4491 Guided Independent Research (1 to 3 credits per course per semester)
Additional information is indexed under Guided Independent Research and Study.

ART 4492 Guided Independent Research (1 to 3 credits per course per semester)
Additional information is indexed under Guided Independent Research and Study.

ART 4493 Guided Independent Study (1 to 3 credits per course per semester)
Additional information is indexed under Guided Independent Research and Study.

ART 4494 Guided Independent Study (1 to 3 credits per course per semester)
Additional information is indexed under Guided Independent Research and Study.

ART 4496 Internship (3-6)
Experiential learning in the context of an art- or design-related profession. Must be approved by the department chairman and cooperating host organization or business. May be repeated for credit up to 9 hours maximum.

ART 4499 Senior Thesis (3-3)
Requirement for all graduating art or design majors in a comprehensive program of study. Production of a body of work related to their area of concentration and the production of a written manifesto and statement. This course should be taken during the semester of graduation.

AEROSPACE COURSES (AS)

AS 3312 Air Force Leadership Studies I (3)
The first of two courses that study leadership and quality management fundamentals, professional knowledge, Air Force doctrine, leadership ethics, and communication skills required of an Air Force officer. Case studies are used to examine Air Force leadership and management situations as a means of demonstrating and exercising practical application of the concepts being studied.

AS L312 Leadership Laboratory I (1)
Leadership laboratory is mandatory for AFROTC cadets and it complements the AS 3312 course by providing cadets with advanced leadership experi-

ences in officer-type activities thus giving students the opportunity to apply leadership and management principles.

AS 3313 Air Force Leadership Studies II (3)
The second of two courses that study leadership and quality management fundamentals, professional knowledge, Air Force doctrine, leadership ethics, and communication skills required of an Air Force officer. Case studies are used to examine Air Force leadership and management situations as a means of demonstrating and exercising practical application of the concepts being studied.

AS L313 Leadership Laboratory II (1)
Leadership laboratory is mandatory for AFROTC cadets and it complements the AS 3313 course by providing cadets with advanced leadership experiences in officer-type activities thus giving students the opportunity to apply leadership and management principles.

AS 4412 National Security Affairs/Preparation for Active Duty I (3)
The first of two courses that examine the national security process, regional studies, advanced leadership ethics, and Air Force doctrine. Special topics of interest focus on the military as a profession, officership, military justice, civilian control of the military, preparation for active duty, and current issues affecting military professionalism. Within this structure, continued emphasis is given to refining communication skills.

AS L412 Leadership Laboratory I (1)
Leadership laboratory is mandatory for AFROTC cadets and it complements the AS 4412 course by providing cadets with advanced leadership experiences, giving students the opportunity to apply the leadership and management principles.

AS 4413 National Security Affairs/Preparation for Active Duty II (3)
The second of two courses that examine the national security process, regional studies, advanced leadership ethics, and Air Force doctrine. Special topics of interest focus on the military as a profession, officership, military justice, civilian control of the military, preparation for active duty, and current issues affecting military professionalism. Within this structure, continued emphasis is given to refining communication skills.

AS L413 Leadership Laboratory II (1)
Leadership laboratory is mandatory for AFROTC cadets, and it complements the AS 4413 course by providing cadets with advanced leadership experiences, giving students the opportunity to apply the leadership and management principles.

AMERICAN SIGN LANGUAGE COURSES (ASL)

ASL 1141 American Sign Language I (3)
Initial course in the four-course sign language developmental sequence which exposes students to the grammatical, syntactical and lexical proficiencies in American Sign Language at a Survival Level. Designed for students who have had no previous knowledge of sign language. Deaf lecturers will introduce rules of interaction in the deaf community.

ASL 1142 American Sign Language II (3)
The second course in the ASL sequence in which students continue to develop ASL proficiencies in lexicon, sign production, use of sentence types, and grammatical features such as use of classifiers, use of space to compare and contract, mouth morphemes, and locatives. Outside interaction with the deaf community is required. *Prerequisite: ASL 1141 or Survival Level on the SCPI or permission of instructor*.

ASL 2241 American Sign Language III (3)
This course builds on skills and knowledge acquired in ASL I and II and focuses on building narrative skills. Students move from an informal to more formal style of signing. Interacting with the deaf community is a required activity. Students should be able to demonstrate intermediate to intermediate plus level conversational skills. *Prerequisite: ASL 1142 or Intermediate on the SCP or permission of instructor.*

ASL 2242 American Sign Language IV (3)
This course builds on the previous ASL courses by increasing expressive and receptive skills with exposure to a wide variety of signing styles. Students will begin text analysis, be introduced to deaf literature, story-telling and signed poetry. *Prerequisite: ASL 2241 or Intermediate on the SCPI or permission of instructor.*

ATHLETIC TRAINING COURSES (AT)

AT 1101 Orientation to Athletic Training Education (1)
Acquaints the Pre-Athletic Training Education student with the six cognitive domains of athletic training education and the athletic training education competencies.

AT 2201 Clinical Experiences in Athletic Training I (1)
Places the entry-level athletic training student in a variety of clinical settings. Laboratory and clinical experiences of AT 2201 will consist of basic clinical skills using a hands-on-approach application of competencies and proficiencies that are introduced in the didactic setting. *Prerequisite: Acceptance into ATEP (first year status). Corequisite: AT 3395*

AT 2202 Clinical Experiences in Athletic Training II (1)
Places the entry-level athletic training student in a variety of clinical settings including but not limited to college/university, general medical, and clinic/outreach. Laboratory and clinical experiences in AT 2202 will consist of basic clinical skills using a hands-on-approach application of competencies and

proficiencies that were learned in AT 2201 and skills introduced in AT 2202. *Prerequisite: Acceptance into ATEP (first year status), AT 2201.*

AT 3301 Clinical Experiences in Athletic Training III (2)
Places the entry-level athletic training student in a variety of clinical settings including but not limited to college/university, general medical, and clinic/outreach. Laboratory and clinical experiences in AT 3301 will consist of basic clinical skills using a hands-on-approach application of competencies and proficiencies that were learned in previous clinical experience courses and skills introduced in AT 3301. *Prerequisite: Acceptance into ATEP, AT 2202*

AT 3302 Clinical Experiences in Athletic Training IV (2)
Places the entry-level athletic training student in a variety of clinical settings including but not limited to college/university, general medical, and clinic/outreach. Laboratory and clinical experiences in AT 3302 will consist of basic clinical skills using a hands-on-approach application of competencies and proficiencies that were learned in previous clinical experiences and skills introduced in AT 3302. *Prerequisite: Acceptance into ATEP, AT 3301*

AT 3360 Principles of Drug Therapy for Athletic Trainers (2)
Acquaints the entry-level athletic training student with the therapeutic medications and the governing regulations most often used in the treatment of injuries and illnesses of athletes and the physically active population. *Prerequisites: CHM 1142, L142, BIO 3347, L347, BIO 3348, L348; senior status.*

AT 3394 Lifting Techniques for Conditioning and Rehabilitative Exercise (1)
Students will gain knowledge of spotting techniques, safety techniques, exercises, periodization and development of strength and conditioning programs on the physically active. *Prerequisite: AT 4447.*

AT 3395 Care and Prevention of Athletic Injuries and Illnesses I (3)
Acquaints the entry-level athletic training student with athletic training educational competencies related to risk management, injury prevention, assessment and evaluation, psycho-social intervention and referral and health care administration. *Prerequisite: acceptance into ATEP.*

AT L395 Care and Prevention of Athletic Injuries and Illnesses Lab (1)
Acquaints the entry-level athletic training student with athletic training educational competencies in the clinical proficiencies, risk management, injury prevention, assessment and evaluation, psychosocial intervention and referral, and health care administration. *Prerequisite: Acceptance into ATEP.*

AT 3396 Evaluation of Athletic Injuries and Illnesses I (3)
Acquaints the entry-level athletic training student with athletic training educational competencies as they relate to acute care of injuries and illnesses to the lower extremity of the human body. *Prerequisite: Acceptance into ATEP.*

AT L396 Evaluation of Athletic Injuries and Illnesses I Lab (1)
Acquaints the entry-level athletic training student with athletic training educational competencies in the clinical proficiencies of injury prevention, assessment and evaluation, and acute care of injuries and illnesses as they relate to the lower extremity. *Co-requisite: AT 3396.*

AT 3397 Evaluation of Athletic Injuries and Illnesses II (3-3)
Acquaints the entry-level athletic training student with athletic training educational competencies as they relate to injury prevention, assessment and evaluation, and acute care of injuries and illnesses to the upper extremity. *Prerequisites: AT 3396, L396.*

AT L397 Evaluation of Athletic Injuries and Illnesses II Lab (1)
Acquaints the entry-level athletic training student with the knowledge of athletic training and educational competencies in the clinical proficiencies of injury prevention, assessment and evaluation, acute care of injuries and illnesses to the upper extremity. *Prerequisites: AT 3396, L396. Co-requisite: AT 3397.*

AT 3398 Organization and Administration for Athletic Trainers (2)
Students are introduced to management techniques, professional practice, insurance and health care administration that are encountered in athletic training. *Prerequisite: AT 3397/L397.*

AT 3399 General Medical Conditions Seminar (1)
A specialized course of general medical conditions designed for entry-level athletic training students with lectures made by various health professionals focusing on pathology and pharmacology.

AT 4401 Clinical Experiences in Athletic Training V (3)
Places the entry level athletic training student in a variety of clinical settings. Clinical Experience will apply clinical skills learned in all previous clinical courses in addition to the advancement and progression of competencies and proficiencies learned in AT 4401. *Prerequisite: Acceptance into ATEP, AT 3302*

AT 4402 Athletic Training Field Experience (12)
Acquaints the entry-level athletic training student with the opportunity to gain practical experience within a clinical and or traditional setting. The student will apply didactic academic preparation at their chosen professional setting. *Prerequisite: AT 4401.*

AT 4447 **Therapeutic Modalities (3)**
Acquaints the entry-level athletic training student with athletic training educational competencies as they relate to the use of therapeutic modalities. *Prerequisites: AT 3397, L397.*

AT L447 **Therapeutic Modalities Lab (1)**
Lab accompanying AT 4447. Students will learn psychomotor skills through the clinical application of therapeutic modalities on the physically active. *Corequisite: AT 4447.*

AT 4448 **Therapeutic Exercises (3)**
Acquaints the entry-level athletic training student with the knowledge of the athletic training educational competencies as they relate to the use of therapeutic exercises. *Prerequisites: AT 3301, 4447.*

AT L448 **Therapeutic Exercises Lab (1)**
Lab accompanying AT 4448. Students will learn psychomotor skills through the clinical application of therapeutic exercise on the physically active.

BIOLOGY COURSES (BIO)

BIO 1100 **Principles of Biology (3)**
Biological principles including chemistry of life, cell structure and function, bioenergetics, cell reproduction, heredity, and ecology. Credit for this course cannot be applied toward any curriculum in biology. *Co-requisite: BIO L100.*

BIO L100 **Principles of Biology Lab (1-2)**
Measurements, microscopy, ecology, cell structure, bioenergetics, cell reproduction, and heredity. *Co-requisite: BIO 1100.*

BIO 1101 **Organismal Biology (3)**
Biological concepts and life processes of protists, fungi, plants, and animals. *Prerequisites: BIO 1100, L100. Co-requisite: BIO L101.*

BIO L101 **Organismal Biology Lab (1-2)**
Survey of organisms from selected phyla, including anatomy, phylogeny, and life histories. *Prerequisites: BIO 1100, L100. Co-requisite: BIO 1101.*

BIO 1110 **Survey of the Human Body (3)**
Biological principles related to the role of humans in an ecosystem, with emphasis on the structure and function of the human body. Credit for this course cannot be applied toward any curriculum in biology. *Co-requisite: BIO L110.*

BIO L110 **Survey of the Human Body Lab (1-2)**
Human physiology and the role that humans play in the biosphere. Credit for this course cannot be applied toward any curriculum in biology. *Co-requisite: BIO 1110.*

BIO 2202 **Principles of Environmental Science (3)**
The consequences of human activities on the environment, emphasizing current global problems, social attitudes, and potential solutions. *Prerequisites: BIO 1100, L100. Co-requisite: BIO L202.*

BIO L202 **Principles of Environmental Science Lab (1-3)**
Laboratory and field-oriented experiences designed to enhance understanding of environmental concepts and issues. *Prerequisites: BIO 1100, L100. Co-requisite: BIO 2202.*

BIO 2205 **Career Opportunities in Medicine and Allied Health Professions (1)**
An introduction to medicine and allied health professions, including academic requirements, job opportunities, and future trends. Professionals from different fields will discuss their specialties to provide students with realistic perspectives.

BIO 2220 **Principles of Cell Biology (3)**
Introduction to cell structure and function with emphasis on comparative morphology, organelle structure and function, and cell physiology. *Prerequisites: BIO 1101, L101. Corequisite: BIO L220.*

BIO L220 **Principles of Cell Biology Laboratory (1)**
Laboratory studies of cell biology with an emphasis on cell anatomy, function and specialization. *Prerequisite: BIO 1101, L101. Corequisite: BIO 2220.*

BIO 2229 **General Ecology (3)**
The relationships of living organisms to one another and to the nonliving environment. Basic ecological concepts with the emphasis on bioenergetics, limiting factors, adaptation to a changing environment, the niche, ecological pyramids, and succession. *Prerequisites: BIO 1101, L101 and CHM 1143, L143. Co-requisite: BIO L229.*

BIO L229 **General Ecology Lab (1-3)**
Introduction to the terminology, procedures and equipment for sampling biotic and abiotic components of ecosystems, the functional and dynamic features of ecosystems, and biotic interactions. *Prerequisites: BIO 1101, L101 and CHM 1143, L143. Co-requisite: BIO 2229.*

BIO 3307 **Invertebrate Zoology (3)**
Major and minor phyla of invertebrates with emphasis on anatomy, classification, life histories, and phylogeny. *Prerequisites: BIO 1101, L101. Co-requisite: BIO L307.*

BIO L307 **Invertebrate Zoology Lab (1-3)**
Anatomy, classification, and life histories of invertebrates. *Prerequisites: BIO 1101, L101. Co-requisite: BIO 3307.*

BIO 3308 **Vertebrate Zoology (3)**
Taxonomy, structure, life histories, behavior, and distribution of vertebrates. *Prerequisites: BIO 1101, L101. Co-requisite: BIO L308.*

BIO L308 Vertebrate Zoology Lab (1-3)
Taxonomy, structure, life histories, and behavior of vertebrates. *Prerequisites: BIO 1101, L101. Co-requisite: BIO 3308.*

BIO 3320 Genetics (3)
Principles of heredity, from basic Mendelian concepts through molecular genetics. *Prerequisites: BIO 1101, L101, 2229, L229, CHM 1143, L143, MTH 1112 or equivalent and MTH 2210 or equivalent, or permission of chair. Co-requisite: BIO L320.*

BIO L320 Genetics Lab (1-3)
Basic laboratory techniques in genetics, including the genetics of common laboratory organisms. *Prerequisites: BIO 1101, L101, 2229, L229, CHM 1143, L143, MTH 1112 or equivalent and MTH 2210 or equivalent, or permission of chair. Co-requisite: BIO 3320.*

BIO 3325 Plant Form and Function (3)
The development, structure, and function of plant tissues and organs. Primary emphasis on anatomical, morphological, and physiological features of angiosperms. *Prerequisites: BIO 1101, L101. Co-requisite: BIO L325.*

BIO L325 Plant Form and Function Lab (1-3)
The development, structure, and function of plant tissues and organs, with the primary emphasis on structures. Prerequisites: BIO 1101, L101. Co-requisite: BIO 3325.

BIO 3326 Plant Diversity (3)
Taxonomy, structures, reproduction, and life cycles of fungi, algae, bryophytes, and vascular plants. *Prerequisites: BIO 1101, L101. Co-requisite: BIO L326.*

BIO L326 Plant Diversity Lab (1-3)
Taxonomy, structures, reproduction, and life cycles of fungi, algae, bryophytes, and vascular plants. *Prerequisites: BIO 1101, L101. Co-requisite: BIO 3326.*

BIO 3328 Environmental Pollution and Control (3)
Sources, effects, and methods of control for air, water, land, and noise pollution. *Prerequisites: BIO 2202, L202, 2229, L229, CHM 1143, L143. Co-requisite: BIO L428.*

BIO L328 Environmental Pollution and Control Lab (1-3)
Field and laboratory techniques for air, water, land, and noise pollution. *Prerequisites: BIO 2202, L202, 2229, L229, CHM 1143, L143. Co-requisite: BIO 4428.*

BIO 3340 Evolution (3)
Evolution is the fundamental unifying theory in biology. The course will introduce the major principles of evolutionary biology such as evolutionary genetics, adaption and natural selection, biological diversity, paleobiology and macroevolution.

BIO 3347 Human Anatomy and Physiology I (3)
Anatomical terminology, a survey of cell types and tissues, and detailed coverage of the integumentary, skeletal, muscular, and nervous systems of humans. *Prerequisites: BIO 1100, L100 or BIO 1110, L110 and CHM 1142, L142 or CHM 1115, L115. Co-requisite: BIO L347.*

BIO L347 Human Anatomy and Physiology I Lab (1-3)
Anatomical terminology, a survey of cell types and tissues, and detailed coverage of the integumentary, skeletal, muscular, and nervous systems of humans. *Prerequisites: BIO 1100, L100 or BIO 1110, L110 and CHM 1142, L142 or CHM 1115, L115. Co-requisite: BIO 3347.*

BIO 3348 Human Anatomy and Physiology II (3)
The endocrine, cardiovascular, lymphatic, respiratory, digestive, urinary, and reproductive systems of humans. *Prerequisites: BIO 3347, L347. Co-requisite: BIO L348.*

BIO L348 Human Anatomy and Physiology II Lab (1-3)
The endocrine, cardiovascular, lymphatic, respiratory, digestive, urinary, and reproductive systems of humans. *Prerequisites: BIO 3347, L347. Co-requisite: BIO 3348.*

BIO 3355 Microscopy and Microtechnique (4)
Study of the theory, operation and use of light and electron microscopy techniques. Study of specimen preparation techniques for the light and electron microscope. *Prerequisites: BIO 1101, L101, CHM 1143, L143.*

BIO 3372 Microbiology (3)
Fundamentals of microbiology including historical perspectives, anatomy and growth of bacteria, microbial metabolism, diseases caused by them, and interrelationships of microorganisms with the environment. *Prerequisites: BIO 1100, L100 or 1110, L110 and CHM 1142, L142 or 1115, L115. Co-requisite: BIO L372.*

BIO L372 Microbiology Lab (1-3)
Fundamentals of microscopy, sterile techniques, staining procedures, isolation techniques, identification of unknowns, and biochemical tests. *Prerequisites: BIO 1100, L100 or 1110, L110 and CHM 1142, L142 or 1115, L115. Co-requisite: BIO 3372.*

BIO 3382 Immunology (3)
The cellular and humoral system involved in the host response and immunity of organisms to foreign substances. Mechanisms of humoral immunity, cellular immunity, and hypersensitivities. *Prerequisites: BIO 3372, L372, CHM 3342, L342. Co-requisite: BIO L382.*

BIO L382 Immunology Lab (1-3)
Analysis of immunological techniques used in research and clinical settings. *Prerequisites: BIO*

3372, L372, CHM 3342, L342. Co-requisite: BIO 3382.

BIO 3386 **Hematology (3)**
The study of blood cells and blood-forming organs under normal and diseased states. *Prerequisites: BIO 3320, L320, 3372, L372, CHM 3342, L342. Co -requisite: BIO L386.*

BIO L386 **Hematology Lab (1-3)**
Cytological and instrumental analyses of blood cells and blood forming organs. Hematological analysis of normal and diseased states. Introduction to blood-banking procedures. *Prerequisites: BIO 3320, L320, 3372, L372, CHM 3342, L342. Co-requisite: BIO 3386.*

BIO 4402 **Spring Flora (4-7)**
Survey of vascular plants from different habitats in southeast Alabama. Principles of plant taxonomy, including history and systems of classification and nomenclature, the use of dichotomous keys, and general herbarium techniques. Emphasis is placed on plant identification and habitat types. *Prerequisites: BIO 1101, L101, 2229, L229.*

BIO 4405 **Entomology (3)**
Orders of insects with the emphasis on morphology, taxonomy, and life cycles. *Prerequisites: BIO 1101, L101. Co-requisite: BIO L405.*

BIO L405 **Entomology Lab (1-3)**
Morphology, classification, and identification of insects. A collection is required. *Prerequisites: BIO 1101, L101. Co-requisite: BIO 4405.*

BIO 4410 **Animal Behavior (3)**
Classical and current concepts of animal behavior including individual and social behavioral patterns. *Prerequisites: BIO 3320, L320. Co-requisite: BIO L410.*

BIO L410 **Animal Behavior Lab (1-3)**
Experimental and observational techniques in behavior. *Prerequisites: BIO 3320, L320. Co-requisite: BIO 4410.*

BIO 4413 **Limnology (3)**
The physical, chemical, geological, and biological aspects of freshwater ecosystems as influenced by activities in surrounding watersheds. *Prerequisites: BIO 2229, L229, CHM 1143, L143. Co-requisite: BIO L413.*

BIO L413 **Limnology Lab (1-3)**
Field and laboratory exercises in lake and stream science, including instrumentation, measurement, sampling, and analysis. *Prerequisites: BIO 2229, L229, CHM 1143, L143. Co-requisite: BIO 4413.*

BIO 4414 **Food Microbiology (3)**
Food spoilage, food preservation, food-borne pathogens, microbial metabolism, and molecular techniques. *Prerequisites: BIO 3372, L372, CHM 3342, L342. Co-requisite: BIO L414.*

BIO L414 **Food Microbiology Lab (1-3)**
Advanced microbiological laboratory techniques including enumeration and analysis of bacteria in food, water, and dairy products. *Prerequisites: BIO 3372, L372, CHM 3342, L342. Co-requisite: BIO 4414.*

BIO 4416 **Microbial Ecology (3)**
A study of the diversity and ecology of microbial populations in ecosystems, with the emphasis on the roles they play in biogeochemical cycles, their contributions to metabolic diversity, their interactions with animals and plants, their niches and bioremediation. Prerequisites: BIO 3372, L372, CHM 3342, L342. Co-requisite: BIO L416.

BIO L416 **Microbial Ecology Lab (1-3)**
A study of the diversity and ecology of microbial populations in ecosystems, with the emphasis on the roles they play in biogeochemical cycles, their contributions to metabolic diversity, their interactions with animals and plants, their niches and bioremediation. Prerequisites: BIO 3372, L372, CHM 3342, L342. Co-requisite: BIO 4416.

BIO 4418 **Food Laws and Regulations (3)**
Introduction to federal, state and local laws pertaining to food safety and sanitation, proper food preservation and labeling, environmental and occupational regulations, Federal Trade Commission regulations, Kosher and Halal food laws, and topics in biotechnology. *Prerequisite: BIO 3372/L372. Corequisite: BIO 4414/L414.*

BIO 4420 **Field Vertebrate Zoology (4-7)**
The basics of vertebrate identification, with emphasis on phylogeny, anatomy, morphology, life histories, habitats, distributions, and conservation. *Prerequisites: BIO 1101, L101, CHM 1143, L143.*

BIO 4421 **Population Ecology (3)**
Animal and plant populations, food supply, competition, disease, fecundity, distribution, and other environmental factors. Management of endangered species and protected ecosystems are included. *Prerequisites: BIO 2229, L229, 3320, L320, CHM 1143, L143, and MTH 2210. Co-requisite: BIO L421.*

BIO L421 **Population Ecology Lab (1-3)**
Field exercises in identifying ecological problems, formulating and testing hypotheses, and evaluating data using standard statistical methods. *Prerequisites: BIO 2229, L229, 3320, L320, CHM 1143, L143, and MTH 2210. Co-requisite: BIO 4421.*

BIO 4425 **Field Botany (4-7)**
Survey of vascular plants from different habitats in southeast Alabama. Principles of plant taxonomy, including history and systems of classification and nomenclature, the use of dichotomous keys, and general herbarium techniques. Emphasis is placed

on plant identification and habitat types. *Prerequisites: BIO 1101, L101, 2229, L229.*

BIO 4430 Applied Genetics (3)
Advanced studies in genetics with emphasis on cytogenetics and molecular genetics. *Prerequisites: BIO 3320, L320, 3372, L372, CHM 3343, L343. Co-requisite: BIO L430.*

BIO L430 Applied Genetics Lab (1-3)
An introduction to procedures and equipment used in the study of cytogenetics and molecular genetics. *Prerequisites: BIO 3320, L320, 3372, L372, CHM 3343, L343. Co-requisite: BIO 4430.*

BIO 4432 Comparative Vertebrate Anatomy (3)
Detailed study of vertebrate organ-systems with emphasis on structural and functional morphology and evolutionary relationships. *Prerequisites: Any 3000-level biology lecture and lab. Co-requisite: BIO L432.*

BIO L432 Comparative Vertebrate Anatomy Lab (1-3)
Detailed study of the shark, mudpuppy, and cat with emphasis on structural and functional morphology. *Prerequisites: Any 3000-level biology lecture and lab. Co-requisite: BIO 4432.*

BIO 4433 Embryology (3)
Embryonic development of vertebrates. This course links cellular and molecular mechanisms to morphogenesis. *Prerequisites: BIO 3320, L320, 3372, L372, CHM 3343, L343. Co-requisite: BIO L433.*

BIO L433 Embryology Lab (1-3)
Embryonic development of vertebrates as illustrated by the frog, chick, and pig. Lab includes experimental investigations of developing systems. *Prerequisites: BIO 3320, L320, 3372, L372, CHM 3343, L343. Co-requisite: BIO 4433.*

BIO 4445 Ichthyology (3)
Morphology, anatomy, physiology, taxonomy, life histories, distribution, and adaptations of fishes. *Prerequisites: BIO 1101, L101, 2229, L229. Co-requisite: BIO L445.*

BIO L445 Ichthyology Lab (1-3)
Structural features, identification, and classification of freshwater and marine fishes. *Prerequisites: BIO 1101, L101, 2229, L229. Co-requisite: BIO 4445.*

BIO 4446 Herpetology (3)
Morphology, anatomy, physiology, taxonomy, life histories, distribution, and adaptations of amphibians and reptiles. *Prerequisites: BIO 1101, L101, 2229, L229. Co-requisite: BIO L446.*

BIO L446 Herpetology Lab (1-3)
Structural features, identification, and classification of amphibians and reptiles. *Prerequisites: BIO 1101, L101, 2229, L229. Co-requisite: BIO 4446.*

BIO 4447 Ornithology (3)
Morphology, anatomy, physiology, taxonomy, life histories, distribution, and adaptations of birds. *Prerequisites: BIO 1101, L101, 2229, L229. Co-requisite: BIO L447.*

BIO L447 Ornithology Lab (1-3)
Structural features, identification, and classification of birds. *Prerequisites: BIO 1101, L101, 2229, L229. Co-requisite: BIO 4447.*

BIO 4448 Mammalogy (3)
Morphology, anatomy, physiology, taxonomy, life histories, distribution, and adaptations of mammals. *Prerequisites: BIO 1101, L101, 2229, L229. Co-requisite: BIO L448.*

BIO L448 Mammalogy Lab (1-3)
Structural features, identification, and classification of mammals. *Prerequisites: BIO 1101, L101, 2229, L229. Co-requisite: BIO 4448.*

BIO 4451 Toxicology (3)
Principles related to the adverse effects of chemicals on living organisms. *Prerequisites: CHM 3342, L342. Co-requisite: BIO L451.*

BIO L451 Toxicology Lab (1-3)
Assessment of the toxicity of chemical agents following standard protocols. *Prerequisites: CHM 3342, L342. Co-requisite: BIO 4451.*

BIO 4452 Industrial Hygiene (3)
Identification and correction of chemical, biological, and physical hazards in and around the workplace. *Prerequisites: CHM 3343, L343. Co-requisite: BIO L452.*

BIO L452 Industrial Hygiene Lab (1-3)
Methods and procedures for sampling, analyzing, and evaluating chemical, biological, and physical agents in the workplace. *Prerequisites: CHM 3343, L343. Co-requisite: BIO 4452.*

BIO 4471 Parasitology (3)
Taxonomy, structure, life histories, distribution, pathogenesis, and control of parasitic protozoa, helminths, and arthropods, with the emphasis on those of medical importance. *Prerequisites: Any 3000-level biology lecture and lab. Co-requisite: BIO L471.*

BIO L471 Parasitology Lab (1-3)
Laboratory study of parasitic protozoa, helminths, and arthropods, with the emphasis on those of medical importance. *Prerequisites: Any 3000-level biology lecture and lab. Co-requisite: BIO 4471.*

BIO 4474 Internship in Biology Education (9)
The Professional Internship Program is the culminating clinical field-based experience for students

seeking certification in a teaching field. The Professional Internship Program provides the student with the opportunity to conduct classes and assume the role of a teacher while receiving supervision from a classroom teacher and a university supervisor for a period of one full semester. The student will demonstrate skills of the informed, reflective decision maker throughout the internship experience. *Prerequisite: Admission to TEP; Co-requisite: SED 4454 Internship Seminar for Secondary Education.*

BIO 4476 Special Topics in Biology (1 to 4 credit hours per course per semester)
Specialized topics not generally included in course offerings. *Prerequisite: Permission of instructor.*

BIO 4478 Cell Biology (3)
Cell structure and function with the emphasis on biochemical and molecular mechanisms. Topics include cell division, movement, differentiation, and recognition. *Prerequisites: BIO 3320, L320, 3372, L372, CHM 3343, L343. Co-requisite: BIO L478.*

BIO L478 Cell Biology Lab (1-3)
Experimental approaches for studying cells at the biochemical and molecular levels. *Prerequisites: BIO 3320, L320, 3372, L372, CHM 3343, L343. Co-requisite: BIO 4478.*

BIO 4479 Environmental Assessment (3)
An examination of theory and practices required in performing stream environmental assessment as currently practiced by state and federal agencies in their attempt to preserve biological integrity. Sustainable management of natural resources and a systems approach to environmental problem solving will be emphasized. Topics covered include water quality, habitat assessment, indicator species used in ecological inventory with a concentration on macro invertebrate and fish assemblages, and the index of biological integrity. *Prerequisites: BIO 1101, L101; 2202, L202 or 2229, L229. Co-requisite: BIO L479.*

BIO L479 Environmental Assessment Lab (1-3)
Laboratory instruction and hands-on field training regarding stream environmental assessment as currently practiced by state agencies in their attempt to preserve biological integrity. Topics covered include measurement of water quality, habitat, and practice sampling techniques, with a concentration on fish and macro invertebrate assemblages. In addition, students will learn the use of the index of biological integrity using their own collections of fish assemblages. *Prerequisites: BIO 1101, L101; 2202, L202 or 2229, L229. Co-requisite: BIO 4479.*

BIO 4480 Histology (3)
Microscopic anatomy and function of cell types and tissues of mammalian organs. *Prerequisites: BIO 1101, L101. Co-requisite: BIO L480.*

BIO L480 Histology Lab (1-3)
Microscopic anatomy of cell types and tissues of mammalian organs. *Prerequisites: BIO 1101, L101. Co-requisite: BIO 4480.*

BIO 4481 Methods and Materials for the Secondary Teacher (3)
A survey of teaching methods and materials appropriate for teaching in the content areas for grades 6-12. Topics addressed will include teacher evaluation in the public schools, collaboration with special education teachers, and lesson planning formats. In addition, teaching methods, selections organization and use of biology/science materials for grades 6-12 will be covered in detail. A professional laboratory experience is included in this course. *Prerequisite: Admission to TEP.*

BIO 4482 Molecular Biology (3)
Fundamental principles of chromosomal organization and gene expression, with emphasis on the structure and function of nucleic acids and proteins. *Prerequisites: BIO 3320, L320, 3372, L372, CHM 3343, L343. Co-requisite: BIO L482.*

BIO L482 Molecular Biology Lab (1-3)
Experimental approaches in molecular analyses of nucleic acids and proteins, with the emphasis placed on common techniques utilized in clinical and research settings. *Prerequisites: BIO 3320, L320, 3372, L372, CHM 3343, L343. Co-requisite: BIO 4482.*

BIO 4488-4489-4490 Internship in Biological or Environmental Science (1 to 3 credit hours per course per semester)
Supervised work experience in the biotechnology industry, medical field, a governmental agency, business or industry, public service organization, food production or food service industry, or other working environment in which a student will learn and apply pertinent professional skills. *Prerequisites: Approval of the student's academic adviser and department chair.*

BIO 4491-4492 Guided Independent Research (1 to 4 credit hours per course per semester)
Additional information is indexed under Guided Independent Research and Study.

BIO 4493-4494 Guided Independent Study (1 to 4 credit hours per course per semester)
Additional information is indexed under Guided Independent Research and Study.

BUSINESS COURSES (BUS)

BUS 1101 Introduction to Business (3)
Topics covered include management, the free enterprise system, accounting, finance, marketing, economics, international business and other business concepts and terminology. May not be taken for credit by business majors.

BUS 3382 Business Communication (3)
Analysis and composition of business and personal communications including mechanics and content of letters and memoranda. *Prerequisite: ENG 1102 or 1104.*

BUS 4400-4404 Business Seminar (3)
Special topics in areas offered by the Sorrell College of Business. Prior credit and topic approval by the dean of Sorrell College of Business required. NOTE: No more than six hours of credit may be earned by seminar. *Prerequisite: Approval of instructor and dean of the Sorrell College of Business.*

BUS 4460 Business Consulting and Research (3)
Small business research and problem-solving with related field experience. *Prerequisite: Permission of the instructor.*

BUS 4493-4494 Guided Independent Study (1 - 3 credit hours per course per semester)
Additional information is indexed under Guided Independent Research and Study. *NOTE: This course may not be substituted for any required course. Also see index for "Independent Study and Research."*

BUS 4499 Internship (1-3 credit hours per course per semester)
Additional information is indexed under Guided Independent Research and Study. *NOTE: This course may not be substituted for any required course.*

CROSS DISCIPLINE COURSES (CDC)

Please consult the index of this catalog to locate additional information regarding cross discipline courses and/or experiential learning credit.

CHINESE (MANDARIN) COURSES (CHI)

CHI 1101 Introductory Chinese (Mandarin) I (3-3)
Introduction to the Chinese (Mandarin) language.

CHI 1102 Introductory Chinese (Mandarin) II (3-3)
Introduction to the Chinese (Mandarin) language. *Prerequisite: CHI 1101 or permission of instructor.*

CHI 2201 Intermediate Chinese (Mandarin) I (3-3)
Progressive development of basic language skills in Mandarin Chinese. *Prerequisite: CHI 1102 or permission of instructor.*

CHI 2202 Intermediate Chinese (Mandarin) II (3-3)
Progressive development of basic language skills in Mandarin Chinese. *Prerequisite: CHI 2201 or permission of instructor.*

CHEMISTRY COURSES (CHM)

CHM 1115 Survey of Chemistry (3)
The course will provide an overview of some of the basic concepts and principles of chemistry. Starting with the structure of the atom, the course will proceed on to basic chemical reactions, the formation of ions, states of matter, chemical equilibrium, and chemical bonding, and will incorporate examples from the biological sciences. *Co-requisite: CHM L115.*

CHM L115 Survey of Chemistry Lab (1 - 2)
The laboratory sessions will provide an overview of some of the basic concepts and techniques of general chemistry experiments. The students will conduct experiments that illustrate the concepts and principles learned in the Survey of Chemistry course lectures. *Co-requisite: CHM 1115.*

CHM 1142 General Chemistry I (3)
Emphasis is placed on the periodic table and stoichiometry, including chemical properties, physical states, and structure. Prerequisite: Pass MTH 1112 with at least a C (or a score of 0, 1, or 5 on the math placement exam). *Co-requisite: CHM L142.*

CHM L142 General Chemistry I Laboratory (1 -3)
Experiments dealing with the periodic table, atomic structure, the gas laws, and stoichiometry. *Co-requisite: CHM 1142.*

CHM 1143 General Chemistry II (3)
Acid-base theory, solutions, chemical equilibria, thermodynamics, kinetics, and electrochemistry. *Prerequisites: CHM 1142 and L142. Co-requisite: CHM L143.*

CHM L143 General Chemistry II Laboratory (1 - 3)
Experiments in acid-base theory, solutions, chemical equilibria, thermodynamics, kinetics, and electrochemistry. *Co-requisite: CHM 1143.*

CHM 2242 Analytical Chemistry (3)
The theoretical principles of modern quantitative wet-chemical methods for determining composition and concentration with rigorous treatment of solution equilibria. *Prerequisites: CHM 1143 and L143. Co-requisite: CHM L242.*

CHM L242 Analytical Chemistry Laboratory (1 - 3)
The practice of modern quantitative wet-chemical techniques in analytical chemistry. *Co-requisite: CHM 2242.*

CHM 3342 Organic Chemistry I (3)
An introduction to the chemistry of carbon compounds that develops the theoretical principles underlying organic materials. *Prerequisites: CHM 1143 and L143. Co-requisite: CHM L342.*

CHM L342 Organic Chemistry I Laboratory (1 - 3)
Experimental techniques and skills for preparing, manipulating, and reacting organic molecules. *Co-requisite: CHM 3342.*

CHM 3343 Organic Chemistry II (3)
A continuation of CHM 3342 with emphasis on modern organic synthesis. *Prerequisites: CHM 3342 and L342. Co-requisite: CHM L343.*

CHM L343 Organic Chemistry II Laboratory (1 - 3)
Experimental techniques and skills for preparing, manipulating, and reacting organic molecules. *Co-requisite: CHM 3343.*

CHM 3350 Principles of Physical Chemistry (3)
An introduction to the principles of chemical thermodynamics, reaction kinetics and chemical equilibrium. *Prerequisites: CHM 3343; PHY 2253 and PHY L253, or PHY 2263 and PHY L263. Co-requisite: CHM L350.*

CHM L350 Principles of Physical Chemistry Laboratory (1-3)
Practical applications of thermochemistry, colligative properties, and reaction kinetics. *Co-requisite: CHM 3350.*

CHM 3352 Biochemistry (3)
This course describes the molecular basis of life and discusses the structure, function and metabolism of proteins, carbohydrates, lipids and nucleid acids. *Prerequisites: CHM 3343, L343. Corequisite: CHM L352.*

CHM L352 Biochemistry Lab (1)
This lab illustrates biochemistry lecture material and acquaints the student with biochemistry techniques and equipment. *Corequisite: CHM 3352.*

CHM 3381 Physical Chemistry I (3)
Theory and applications of thermodynamics, reaction kinetics, and transport properties with an emphasis on the description of ideal/non-ideal gases and solutions. *Prerequisite: CHM 3343; PHY 2253 and L253 or PHY 2263 and L263; MTH 1126. Co-requisite: CHM L381.*

CHM L381 Physical Chemistry I Laboratory (1 - 3)
Introduction to methods and techniques used in the physical chemistry laboratory, including experiments in calorimetry, phase equilibria, reaction kinetics, and transport properties. *Co-requisite: CHM 3381.*

CHM 3382 Physical Chemistry II (3)
A continuation of CHM 3381 with an introduction to surface phenomena, quantum chemistry, and spectroscopy with an emphasis on properties of surfaces, atomic and molecular structure, molecular orbital theory, and photochemistry. *Prerequisite: CHM 3381.*

CHM L382 Physical Chemistry II Laboratory (1-3)
A continuation of CHM L381 with an introduction to methods and techniques in computational chemistry and spectroscopy. *Co-requisite or prerequisite: CHM 3382.*

CHM 4400 Special Topics in Chemistry (3)
A study of topics of special interest, such as advanced physical chemistry, advanced analytical chemistry, advanced organic, group theory, surface chemistry, and colloid chemistry. *Prerequisites: CHM 2242 and CHM 3343.*

CHM 4403 Advanced Organic Chemistry (3)
A more in-depth study of many of the topics studied in Organic Chemistry I and II. Topics include reaction mechanisms, synthetic methods, structure determination using spectroscopic techniques, and stereochemistry. *Offered only at Dothan. Prerequisites: CHM 3343 and L343.*

CHM 4444 Advanced Inorganic Chemistry (3)
Spectroscopy of inorganic molecules, detailed molecular orbital applications, descriptive chemistry of the transition elements, including organometallic and bioinorganic compounds. *Prerequisites: CHM 2242 and 3381.*

CHM L444 Advanced Inorganic Laboratory (1)
Preparation and characterization of inorganic compounds. Experience will be provided in techniques such as using a tube furnace and handling air-sensitive compounds with a glove gab and Schlenk line. *Co-requisite or prerequisite: CHM 4444.*

CHM 4445 Instrumental Analysis (3)
The operating principles of modern analytical instrumentation for determining composition and concentration. *Prerequisites: CHM 2242, CHM 3343; PHY 2253 and L253 or PHY 2263 and L263. Co-requisite: CHM L445.*

CHM L445 Instrumental Analysis Laboratory (1)
The practical application of select modern analytical instruments to qualitative and quantitative examination of matter. Considerable attention is given to the instrument and elementary electronics involved in each. *Co-requisite: CHM 4445.*

CHM 4474 Internship in Chemistry Education (9)
The Professional Internship Program is the culminating clinical field-based experience for students seeking certification in a teaching field. The Professional Internship Program provides the student with the opportunity to conduct classes and assume the role of a teacher while receiving supervision from a classroom teacher and a university supervisor for a period of one full semester. The student will demonstrate skills of the informed, reflective decision maker throughout the internship experience. *Prerequisite: Admission to TEP; Co-requisite: SED 4454 Internship Seminar for Secondary Education.*

CHM 4481 Methods and Materials for the Secondary Teacher (3)
A survey of teaching methods and materials appropriate for teaching in the content areas for grades 6-12. Topics addressed will include teacher evaluation in the public schools, collaboration with special education teachers, and lesson planning formats. In addition, teaching methods, selections organization and use of chemistry/science materials for grades 6-12 will be covered in detail. A professional laboratory experience is included in this course. *Prerequisite: Admission to TEP.*

CHM 4491-4492 Guided Independent Research (1 - 3 credit hours per course per semester)
Additional information is listed under Independent Research and Study in the section on Academic Regulations.

CHM 4493-4494 Guided Independent Study (1 - 3 credit hours per course per semester)
See index for "Independent Study and Research."

CHM 4499 Senior Seminar (1 - 3)
Principles of preparing and presenting an oral presentation on a selected chemical topic in the current literature.

CRIMINAL JUSTICE COURSES (CJ)

CJ 1101 Introduction Criminal Justice (3)
Agencies and processes involved in the administration of criminal justice. *This course is a prerequisite for all 3000- and 4000-level courses unless waived by student's adviser.*

CJ 2221 Survey of Law Enforcement (3)
A survey of policing, covering developmental history, the system of law enforcement organizations in the U.S., personnel administration, police roles and behavior, operations, and major issues such as discretion, civil liability, risk, and excessive force.

CJ 2231 Survey of Corrections (3)
Philosophy, theory, and practices involved in the treatment of convicted law violators, the examination, and the appraisal of the effects of correctional treatment upon post-correctional behavior.

CJ 2241 Survey of Law and Criminal Procedure (3)
An examination of the American legal system with emphasis on the analysis and processing of criminal offenses, including an examination of constitutional criminal procedure concerning arrest, pre-trial and trial processes.

CJ 3302 Criminal Justice Administration (3)
A survey of public administration as it applies to criminal justice organizations. The major dimensions of criminal justice organizations examined include organizational theory, organizational design, leadership and decision making, interpersonal and organizational communication, human resource management, legal aspects of administration, financial management, and organizational change.

CJ 3310 Psychology for Criminal Justice Officials (3)
Behavior of subjects and police officers in normal and unusual conditions, arrest, interrogation, detention, incarceration, protest, demonstrations, riots, public calamities, reactions of special interest groups, minorities, and specialized tests.

CJ 3325 Juvenile Justice (3)
Provides a basic overview of the American juvenile justice system, beginning with the development of the juvenile court and addressing the jurisdiction, role, responsibilities, administration, and organization of the juvenile justice system. Also examined are the interfaces between police, schools, and the court, the issues of child abuse, and the operation of treatment programs.

CJ 3335 Private and Public Security Administration (3)
An introduction to the administration of private security, the analog to the police in the public sector. Issues in private security concerning ethics, law, and policy, as well as administration, are considered.

CJ 3345 Criminology (3)
An examination of crime, overall and by category, and an examination of theories of crime causation, their research support and their impact on social policy, categories of crime, etc. The criminological theories covered will be classical, biological, sociological, psychological, economic, and multidisciplinary.

CJ 3352 Constitutional Law in Criminal Justice (3)
Constitutional provisions which are relevant to criminal law and procedure, their construction and development through court interpretation, and their application in criminal proceedings.

CJ 3365 Victimology (3)
This course provides an opportunity for the student to gain an understanding of the crime victim's position and issues with the criminal justice system. Specifically, trends, applied responses to victimization, offender-victim relationships, typologies, measuring victimization, and prevention are examined.

CJ 3367 History of Criminal Justice (3)
Upon completion of the course the student must have demonstrated his/her knowledge of criminal justice systems from approximately 1700 B.C. to the present. With that knowledge and comprehension, the student should be able to analyze and apply lessons learned from that historical context to current situations in the United States Criminal Justice System.

CJ 3375 Introduction to Social Scientific Inquiry (3)
Principles of pure and applied research for the social sciences. Special emphasis is given to the types of research methods employed by social scientists including survey techniques, field research, quasi-experimental designs and analytical procedures

currently used in the social sciences. *Prerequisite: General studies math.*

CJ 3376 Application of Social Scientific Inquiry (3)
A detailed description of what social scientists do with the information they gather. Particular attention is given to descriptive and inferential statistics, the relationship between research and policy, evaluation research, and research ethics. *Prerequisite: General studies math.*

CJ 4415 Correctional Systems and Practices (3)
An examination of the day-to-day operations and practices in modern correctional facilities in the local, state, and federal systems.

CJ 4420 Comparative Criminal Justice (3)
A comparative examination of criminal justice systems throughout the world with specific attention given to legal and political systems, organization and methods of law enforcement, jurisprudence, correctional policies, and practices. Theoretical frameworks, models, and propositions addressing crime across various societies are also considered.

CJ 4421 Ethics in Criminal Justice (3)
An introduction to concepts of ethics and an examination of contemporary ethical issues in the field of criminal justice.

CJ 4430 Selected Topics in Criminal Justice (3)
An examination of a criminal justice topic chosen for its current or special interest and importance and that is not given in-depth coverage in other courses; selection topics will vary with each course offering (although a particular topic may be offered more than once.)

CJ 4435 Grant Writing (3)
A detailed examination of how to apply to governmental and private entities for funding of various programs and projects in the field of criminal justice.

CJ 4440 Terrorism (3)
A critical examination and analysis of major issues, definitions, and controversies associated with the development of terrorism in the modern world. Historical, religious, and psychological and sociological aspects and explanations of terrorism will be covered, along with the characteristic means and methods terrorist groups employ.

CJ 4442 Criminal Investigation and Evidence (3)
A detailed examination of what is necessary to solve criminal cases and prove guilt beyond a reasonable doubt in court. Emphasis on leadership and management actions taken to enhance investigative efforts in law enforcement operation.

CJ 4445 Current Issues in Law Enforcement Operations and Administration (3)
A detailed examination of applied concepts of leadership and problem solving in law enforcement operations and administrations. Special emphasis is attached to current problems surfacing in law enforcement.

CJ 4446 Current Issues in Correctional Operations and Administration (3)
A detailed examination of applied concepts of leadership and problem solving in corrections and administration. Special emphasis is attached to current problems surfacing in corrections.

CJ 4447 Current Issues in Legal Systems Operation and Administration (3)
A study of the critical issues and concepts involved in modern court administration, including the law governing the presentation of evidence in the trial of criminal cases, analysis of the role of law, and the courts in American Society.

CJ 4462 Polygraph: History and Investigative Applications (3)
An historical perspective of the polygraph and an overview of legal issues concerning clinical polygraph examinations, criminal specific examinations, and the limitations of polygraphs.

CJ 4470 Criminal Justice Issues in Homeland Security (3)
An examination of the political and social complexities and dilemmas associated with state and local law enforcement and federal agencies roles in the defense of our nation subsequent to September 11, 2001.

CJ 4472 Cyber Crime (3)
This course will introduce the topics of computer crime and computer forensics. Students will be required to learn different aspects of computer crime and ways to uncover, protect, and exploit digital evidence. Students will be exposed to different types of tools, both software and hardware, and an exploration of the legal issues affected by online and computer-related criminal conduct. The course will examine the evolution of criminal law relative to the development of new technology.

CJ 4488-4489-4490 Internship in a Criminal Justice Agency (3)
Experience in a selected criminal justice agency, working in groups or individually. Supervised application and observation of concepts, principles, skills, operation and functions of knowledge acquired by the student in previous or current course work and studies. Problems will be identified with attendant solutions in the areas of police work, the correctional agencies, or the court systems as appropriate to the student's program of study.

CJ 4491-4492 Guided Independent Research (1 to 3 credit hours per course per semester)
Additional information is indexed under Guided Independent Research and Study.

CJ 4493-4494 Guided Independent Study (1 to 3 credit hours per course semester)
Additional information is indexed under Guided Independent Research and Study.

CJ 4499 Senior Seminar in Criminal Justice (3-3)
This is a capstone course designed to (1) help seniors integrate the knowledge gained from their other required criminal justice courses, (2) assist them in developing analytical thinking skills through focusing on selected topics using a seminar approach, and (3) support them in gaining a better understanding of the criminal justice profession and the role they may play in it.

CLASSICS COURSES (CLA)

CLA 2260 Classical Mythology (3)
Myths of the Greeks and Romans and their influence.

CLA 2290 Classical Literature in English Translation (3)
Greek and Roman masterpieces as expressions of humanity. *Prerequisites: ENG 1101, 1102.*

CLA 3311 Civilization of Greece (3)
Historical and cultural achievements of the Greeks and their legacy to the modern world. *Note: May be taken for credit as an elective in the Department of History.*

CLA 3312 Civilization of Rome (3)
Historical and cultural achievements of the Romans and their legacy to the modern world. *Note: May be taken for credit as an elective in the Department of History.*

CLA 3330 Classical Epic (3)
Homer's *Iliad* and *Odyssey*, Virgil's *Aeneid*, and the epic tradition.

CLA 3350 Classical Drama (3)
The ancient theatre and its influence with selected plays by Greek and Roman playwrights.

CLA 4400 Selected Topics in Classics (3)
Selected topics in classical studies generally not covered in other courses. *Note: May be repeated once for credit.*

CLA 4491 Guided Independent Research (1 to 3 credit hours per course per semester)
Additional information is indexed under Guided Independent Research and Study.

CLA 4492 Guided Independent Research (1 to 3 credit hours per course per semester)
Additional information is indexed under Guided Independent Research and Study.

CLA 4493 Guided Independent Study (1 to 3 credit hours per course per semester)
Additional information is indexed under Guided Independent Research and Study.

CLA 4494 Guided Independent Study (1 to 3 credit hours per course per semester)
Additional information is indexed under Guided Independent Research and Study.

SPEECH COMMUNICATION COURSES (COM)

COM 2220 Ethnicity and Race in American Media (3-3)
This course examines ethnicity and race in American mass media. Students will be introduced to techniques for evaluating and analyzing mediated representations of minority groups. Students will examine the impact of mediated stereotypical portrayals of underrepresented populations.

COM 2222 Introduction to Human Communication (3-3)
This course presents a broad survey of issues within the growing field of research, theory and practice in Communication. The course will cover concepts ranging from interpersonal communication to communication in popular culture to causes and remedies for conflicts. This course will also address the roles of community, media, culture and other factors that all affect the way human being communicate with one another.

COM 2241 Fundamentals of Speech (3-3)
This course is a study of the principles and practices basic to public speaking. This course is designed to enhance the student's verbal and nonverbal communication skills through oral communication theory and practical application.

COM 2243 Honors Fundamentals of Speech (3-3)
Study and application of the principles and practices basic to all areas of oral communication. As part of the university's Honors Program, the course is designed to achieve the student's leadership objectives through improved verbal and non-verbal communication skills by means of a focus on one substantive area of interest.

COM 3324 Gender Communication (3-3)
This course examines the communication styles of males and females emphasizing gender-related communication behavior and its implications for the ability to maintain effective personal and professional relationships. *Prerequisite: COM 2241 or permission of instructor.*

COM 3326 Conflict Management (3-3)
This course is designed to offer students opportunities to enhance and improve their communication techniques and skills in conflict management. The course teaches students communication methods to manage productively interpersonal disputes between/among parties. It emphasizes building partnerships and long-term positive relationships in the business world and in one's personal life. *Prerequisite: COM 2241 or permission of instructor.*

COM 3328 International/Intercultural Communication (3-3)
This course is designed to introduce students to the basic concepts, principles, and skills needed for improving communication among persons from different minority, racial, ethnic and cultural backgrounds. *Prerequisite: COM 2241 or permission of instructor.*

COM 3330 Interviewing (3-3)
Study of the principles and practices of professional and personal interviewing, with an emphasis on oral communication and related topics such as resume writing.

COM 3341 American Public Address (3-3)
Study of the history and rhetorical criticism of major American speakers and their speeches from the Colonial to the Contemporary periods, with references to their biographical, intellectual, political and social contexts.

COM 3342 Argumentation and Debate (3-3)
Study and application of the principles of argumentation and debate, including selected aspects of the management of a program of competitive forensics. *Prerequisite: COM 2241 or permission of the instructor.*

COM 3345 Group discussion and Leadership (3-3)
Study and application of the principles and practices of group problem solving through the study of the dynamics of discussion and group leadership.

COM 4400 Special Topics in Communication Studies (1-3/1-3)
Examination of selected topics in communication studies not included in the established curriculum. Content may be of a historical, thematic, or technological nature. May be repeated for credit. *Prerequisite: COM 2241*

COM 4420 Propaganda and Persuasion(3-3)
This course will explore influence techniques in print, graphics, traditional media and social reality as they migrate to interactive spaces. The course will first examine the history and fundamentals of persuasion, influence, and coercion, and then look at how they have been adapted for use in today's interactive contexts. Throughout this course there will be a discussion of the relative ethics of using propagandistic/persuasive techniques for different purposes. *Prerequisite: COM 2241*

COM 4422 The Rhetoric of the Civil Rights Movement (3-3)
This course will focus on civil rights discourse and its relationship to equality and participation in the U.S. and other nations worldwide. Using the struggle of African Americans as an instructive exemplar, this course will examine the philosophical concepts, political issues, moral complexities, and discursive characteristics of civil rights rhetoric. *Prerequisite: COM 2241*

COM 4424 Rhetorical and Communication Theory (3-3)
This course presents an introduction to rhetorical theory and communication theory; students will gain experience in applying theoretical approaches to practical applications in criticism and analysis of communication. Students will gain insights into how to communicate effectively in writing, visually and orally as well as how to analyze critically communication occurring in a wide array of contexts and for different purposes, from private and interpersonal settings to public and professional arenas. *Prerequisite: COM 2241*

COM 4426 Organizational Communication (3-3)
This course presents both historical and current perspectives on the origins and usefulness of organizational theory relating to communication issues; it emphasizes the relationship between organizational life and communication principles; and provides both theory and the opportunity for the practical application of communication skills in a variety of organizational settings. *Prerequisite: COM 2241*

COM 4431 Interpersonal Communication (3-3)
Study of theories of communication behavior in relatively unstructured face-to-face situations, including small-group discussion. *Prerequisite: COM 2241 or permission of the instructor.*

COM 4441 Oral Interpretation (2-2)
Study and application of the principles and practices of oral interpretation (reading) of literature, including individual and ensemble performance. *Prerequisite: COM 2241 or permission of the instructor.*

COM 4455 Speech Senior Capstone (2)
Design and execution of a major field-related or other research project and formal presentation of results thereof. Together with the taking of a comprehensive exit exam, the student will thereby demonstrate competency in the components of speech communication. *Prerequisite: COM or permission of the instructor.*

COM 4491-4492 Guided Independent Research (1-3 credit hours per course)
Additional information is indexed under Guided Independent Research and Study.

COM 4493-4494 Guided Independent Study (1-3 credit hours per course)
Additional information is indexed under Guided Independent Research and Study

COM 4499 Communication Internship (3-6)
Full-time work experience as a regular staff member in a communication-related position. Student will work under the supervision of an on-the-job supervisor and report to a Troy University faculty advisor who will monitor the work experience. Student will also prepare written and oral reports. *Prerequisites: Approval of the academic adviser and department chair, a minimum of 75 hours of course work, completion of a Permission to Register for an Internship Form, and successful comple-*

tion of an internship workshop prior to registering for the internship.

COMPUTER SCIENCE COURSES (CS)

CS 2250 Computer Science I (3)
An introduction to the theory and development aspects of a high-level programming language. The course covers programming method0logies, control structures, predefined and user defined functions, input/output streams, control structures, logical expressions, enumeration, repetition, multidimensional array and string manipulation, structures, searching, sorting techniques, and advanced input/output. Program analysis, design, development, and testing are emphasized. *Prerequisite: MTH 1112*

CS 2255 Computer Science II (3)
A continuation of Computer Science I to include advanced programming techniques including classes and data abstractions, inheritance and composition, pointers, virtual functions, overloading, exception handling, and recursion. Students analyze, design, implement, and test complex programs. *Prerequisite: CS 2250*

CS 2265 Advanced Programming 1 (3)
Provides student the opportunity to gain experience and training in an additional high-level language. The course focuses on advanced topics including objects, structures, applets, graphics, exception handling, files, and streaming. *Prerequisite: CS 2255.*

CS 3310 Foundations of Computer Science (3)
A broad perspective of computer science concepts intended as preparation for more in-depth coverage in higher-level courses. Topics include machine and assembly language programming, computer system organization and operation, logic circuits, finite-state diagrams and programming language grammar, Boolean algebra, and circuit design considerations. *Prerequisite: CS 2250*

CS 3320 Business Systems Programming (3)
The study and application of a business-oriented programming language. Students apply a structured, multiphase program development process that features a series of steps involving understanding of problems, formal problem definition, design methodologies, program specification, and file definition as applied to business processing systems. The course includes the study and application of the following concepts: structured design methodology, divisions, arithmetic and intrinsic functions, decisions structures and logical control structures, iterative processes, case structure, error capture, batch processing, file manipulation, table manipulation, and interactive structures. *Prerequisite: CS 2255*

CS 3323 Data Structures (3)
A survey of data structures that includes lists, ordered lists, linked lists, stacks, queues and trees. Also included are measurement of program performance and how program performance is affected by alternative data structures. These concepts are presented within an object-oriented framework. Programming labs are included. *Prerequisite: CS 2255, MTH 1125, 2215.*

CS 3325 Operations Research (3)
Introduction to operations research, linear programming, simplex-based sensitivity analysis and duality, linear programming applications, network models, simulation, waiting line models, Markov processes, forecasting, and inventory models. *Prerequisites: MTH 1125*

CS 3329 Analysis of Algorithms (3)
Alternative techniques to solve computer science problems are presented. Problems include sorting, searching, and graph traversal, lists, ordered lists, linked lists, stacks, queues, and trees. These concepts are presented within an object-oriented framework. *Prerequisite: CS 3323.*

CS 3330 Data Structures and Algorithms (3)
A course in fundamental data structures concepts and alternative techniques for solving real-world problems in computer science. Concepts and application covered include analysis of data representation and associated algorithms, including linked lists, queues, stacks, arrays, graphs, trees, searching, sorting, string matching, and the application of recursive techniques. The course will place an emphasis on the implementation of various algorithms and data structures. *Prerequisites: CS 2255, MTH 2201, 2215*

CS 3331 Fundamentals of Artificial Intelligence (3)
Approaches to the definition of artificial intelligence and to the design and implementation of intelligent computer systems. Topics include the Turing Test, Sourly; Chinese Room, blackboard systems, logic programming, knowledge based systems, scripts and schemas, and heuristic search techniques. *Prerequisite: CS 3323 or CS 3330.*

CS 3332 Software Engineering I (3)
Topics are presented that focus on the design and development techniques for large high quality software systems. They include project management issues, analysis and design methods, and approaches to testing. *Prerequisite: CS 3323 or CS 3330.*

CS 3347 Advanced Programming II (3)
Provides student the opportunity to gain experience and training in an additional high level language. Topics include interactive techniques, arrays, multiple forms, data files and databases, grids, graphics, OLE, DLL's and custom objects. Emphasis is on finding creative solutions to application problems. *Prerequisite: CS 2255.*

CS 3360 Concepts of Object Oriented Programming I (3)
Provides students the opportunity to gain experience and training in an additional high level language. The course focuses on advanced topics including classes, objects, interfaces, applications,

encapsulation, exceptions, multithreading, graphics, exception handling, files, and streaming. *Prerequisite: CS 2255*

CS 3361 Concepts of Object Oriented Programming II (3)

The conceptual framework for object-oriented programming and systems. Topics include classes, data hiding, modularity, inheritance, and reusable code presented through the use of some object-oriented language. *Prerequisite: CS 3360*

CS 3365 Introduction to Computer Organization and Architecture (3)

Organization and operation of computer systems. Topics include hardware components of digital computers, micro-programming, memory management, interrupt organization, addressing modes, and instruction formats. *Prerequisite: CS 3310*

CS 3370 Nature of Programming Languages (3)

Basic principles and concepts of programming languages including what a programming language is, various paradigms that a language can follow, and how its syntactical and semantic structures can be specified. The traditional object-oriented paradigm will be presented as well as non-traditional paradigms based on symbolic logic (logic programming) and on functions in lambda calculus (functional programming). *Prerequisite: CS 3323 or 3330.*

CS 3372 Formal Languages and the Theory of Computation (3)

Formal language theory, including the Chomsky hierarchy, is presented. Emphasis is placed on regular and context free grammars, finite state automata, and translators. *Prerequisite: CS 3323 or 3330*

CS 4401 Advanced Artificial Intelligence (3)

A continuation of Fundamentals of AI. A topic of research including logic programming, fuzzy sets genetic algorithms, artificial neural networks, or pattern analysis is included. *Prerequisite: CS 3331*.

CS 4420 Introduction to Database Systems (3)

The fundamental concepts and structures necessary for the design and implementation of a database management system. Students design, load, and query a database using tools such as E-R diagrams and SQL. Also includes data normalization and file and index organization. *Prerequisite: CS 3323 or CS 3330.*

CS 4443 Web-Based Software Development (3)

The essentials of Internet programming. Students will design and write Web page applications utilizing Internet programming techniques including scripting languages and hypertext. Programs will manipulate many forms of data including hypertext, graphics, audio, and video. Students use state-of-the-art development tools and design methods to implement an enterprise web application. *Prerequisite: CS 3323 or 3330*

CS 4445 Data Communication and Networking (3)

An overview of local-area and wide-area systems. Issues discussed include standards, topologies, management, communication protocols, and security. *Prerequisite: CS 3310 or 3330.*

CS 4447 Systems Analysis and Design (3)

Study of the analysis of computer-based information systems. Emphasis is placed on analysis, specifications development, design, and development of information systems, including the software and databases that support the business needs of organizations. Both data-oriented and process-oriented design methods are covered. Topics include the systems analyst, the systems development life cycle, methodologies, development technology, systems planning, project management, systems analysis, systems design, systems implementation, and systems support. *Prerequisite: CS 3323 or CS 3330.*

CS 4448 Operating Systems (3)

An overview of operating system functions and components. Issues include process definition, scheduling, and memory management. Various modern operating systems are compared. *Prerequisite: CS 3323 or 3330*

CS 4449 Applied Networking (3)

Computer networks and the use of computer networks in industry environments. Topics covered include client-server networks, network hardware and software, distributed computing, user requirements, considerations in physical media and topology, selection of Network Operating Systems (NOS), computing platforms, network administration, applications software, internetworking components, and key issues in network management. *Prerequisite: CS 4445; CS 4448 recommended.*

CS 4451 Computer Security (3)

Basic security concepts and principles applied to real-world applications. Introduces the major elements that go into a security implementation, including encryption, authentication, access control lists, execution control lists, vulnerability of operating systems, auditing, performing vulnerability analysis and risk assessment, developing a security plan and protecting data, systems and infrastructure. This course also builds on the fundamentals of reliability and safety engineering, which include software reliability, growth models, testing and stopping-rules, safety methods and redundancy. *Prerequisite: CS 3323 or 3330*

CS 4461 Software Engineering II (3)

This course is a continuation of Software Engineering I with additional topics that include software quality insurance and testing techniques. Students will design, implement and test a large project. *Prerequisite: CS 3332*

CS 4462 Special Topics in Object-Oriented Programming (3)

This course is a continuation of CS 3361. It presents the conceptual framework for the design of

object-oriented systems. Topics include refactoring designs and design patterns, presented through the use of some object-oriented language. *Prerequisite: CS 3361.*

CS 4495 Special Topics in Computer Science (3)
Topics in computer science that are not included in regular course offerings. Specific contents are announced in the course schedule for a given term. *Prerequisites: senior standing or consent of instructor.*

DANCE COURSES (DAN)

DAN 1130 Social Dance in the 21st Century (1)
A cross-cultural survey of theories and styles of dance, their relationship to societal contexts and other art forms.

DAN 1132 Contemporary I (1)
Development of technical skills in beginning contemporary dance, including rhythmic perception and spatial awareness with introduction to aesthetic and expressive qualities that lead to performance.

DAN 1134 Ballroom Dance
An introduction to social dancing with an emphasis on American ballroom dances (foxtrot, waltz, swing) and Latin ballroom dances (cha cha, mambo, tango). Equivalent to KHP 1134.

DAN 1135 Ballet I (1)
The development of technical skills in beginning ballet, including safe and efficient alignment and clear articulation of movement vocabulary with emphasis on increased vocabulary and musicality.

DAN 1136 Jazz I (1)
The study and application of the fundamental concepts, skills, movement vocabulary, and artistic expression specific to beginning jazz dance.

DAN 1137 Tap I (1)
Progressive development of beginning to low/intermediate movement concepts, skills, vocabulary, and styles specific to tap dance.

DAN 2200 Orientation to Dance (2)
Introduction to the basic concepts and principles common to ballet, contemporary and jazz dance through studio experience, discussions and concert attendance. This is a skills class.

DAN 2232 Contemporary II (2)
Refinement of technical skills in contemporary/modern dance at the intermediate/high intermediate level, including complex movement capabilities, rhythmic structures, spatial relationships, movement vocabulary with emphasis on aesthetic and expressive qualities that lead to performance. *Prerequisite: Audition placement or permission of the Department of Theatre and Dance.*

DAN 2235 Ballet II (2)
Further development of technical skills in intermediate ballet, including dynamic alignment, body/mind connection, with emphasis on self-expression through the ballet aesthetic, increased vocabulary and musicality. *Prerequisite: Audition placement or permission of the Department of Theatre and Dance.*

DAN 2236 Jazz II (2)
The study and application of the fundamental concepts, skills, movement vocabulary and artistic expression specific to tap dance. *Prerequisite: DAN 1137 or permission of the Department of Theatre and Dance.*

DAN 2237 Tap II (1)
Progressive development of intermediate to intermediate/high movement concepts, skills, vocabulary, and styles specific to tap dance. *Prerequisite: DAN 1137 or permission of the Department of Theatre and Dance*

DAN 2252 Methods of Teaching Dance (3)
Social, folk and square dancing, including basic rhythmic activities which can be taught in elementary, middle and high schools. Equivalent to KHP 2252.

DAN 3300 Musical Theatre Dance (2)
The exploration of the genre of musical theatre dance in early and contemporary American jazz and tap styles that relate to theatre productions. Prerequisites: DAN 1135 and 1137 or higher.

DAN 3330 Special Topics in Dance (1-2-3)
Special topics in dance.

DAN 3332 Contemporary III (2)
Continued refinement of technical skills in contemporary/modern dance at the high intermediate/advanced level, including complex movement capabilities, rhythmic structures, spatial relationships, movement vocabulary with emphasis on aesthetic and expressive qualities that lead to performance. *Prerequisite: Audition placement or permission of the Department of Theatre and Dance.*

DAN 3335 Ballet III (2)
Further development of technical skills in advanced ballet, including dynamic alignment, body/mind connection, with emphasis on self expression through the ballet aesthetic. *Prerequisite: Audition placement or permission of the Department of Theatre and Dance.*

DAN 3336 Jazz III (2)
The study of the advanced concepts, skills, movement vocabulary and artistic expression specific to jazz. *Prerequisite: Audition placement of permission of the Department of Theatre and Dance.*

DAN 3340 Dance Composition and Choreography I (2)
An exploration of movement and an analytical study of the art of making dances. The course will concentrate on the four basic elements of composition: space, shape, time and energy. *Prerequisite: Permission of the Department of Theatre and Dance.*

DAN 3388 Dance Practicum I (1)
This course is designed to provide the student individual practical performance experience with Troy University Theatre or area or university dance productions, or choreographic opportunities that involve the students setting performance pieces on area dance companies, teams, studio classes or university theatre productions or teaching experience in area schools and/or studios.

DAN 3389 Dance Practicum II (2)
A highly individualized practical experience course designed to provide opportunities for the student in choreography, teaching, performance, production, design, or management involving a continuation of the project begun in DAN 3388 or a different project altogether. *Prerequisite: DAN 3388*

DAN 4400 Repertory Ensemble (1)
Designed and mandatory for auditioned members and apprentices of the Troy Dance Repertory Ensemble. Through rehearsal, performance and discussion, dancers will gain further proficiency in dance by learning choreography for performance in various dance styles. Choreography will subsequently be presented in various educational settings in surrounding areas. *Prerequisite: Audition or invitation*.

DAN 4489 Dance Practicum III (2)
A highly individualized practical experience course designed to provide opportunities for the student in choreography, teaching, performance, production, design or management involving a continuation of the project begun in DAN 3389 or a different project altogether. Prerequisite: DAN 3389 and permission of the Department of Theatre and Dance

DRAMATIC ARTS COURSES (DRA)

DRA 2200 Introduction to Drama (2-2)
An introduction to theatre as a fine art and as a vital part of our western culture, the course focuses on the aspects of audience, production, and performance. It is designed for the student who wishes to gain a fundamental understanding and an appreciation of the theatrical arts in our society.

DRA 2211 Theatre for Youth (1-3)
The Ensemble performs well-known children's classics for Alabama elementary-age students and others. Ensemble membership is open by audition. The stress is on improvisation. May be repeated for credit.

DRA 2221 Technical Theatre (2-3)
A study of standard technical practices and equipment for the theatre.

DRA 2245 Stagecraft Lab (1-3)
Stagecraft Lab provides the basic elements of theatrical production through participation in acting (actors selected through audition), management, and/or technical theatre, including scenery, props, lighting, sound, costumes, makeup, business and publicity. All majors must complete four semesters of DRA 2245 with a rotation of crew work in scenery, lighting, costumes, and marketing.

DRA 2251 Voice and Diction (2-2)
Study of individual and group practice in the effective use and control of the mechanics of oral delivery with a focus on the "professional dialect," the general American dialect and/or the standard dialect. Includes use of the International Phonetic Alphabet.

DRA 3301 Acting I (2-3)
A study of basic principles, terminology, and disciplines of the actor, including relaxation, concentration, movement, and characterization.

DRA 3302 Costume Techniques (2-3)
A study of the techniques of costume construction, including methods of drafting patterns, building and/or modifying costumes, and the application of arts and crafts.

DRA 3303 Makeup Techniques (1-2)
A study of the theory and techniques of stage make -up. Includes makeup for theatre, film, and video.

DRA 3304 Lighting Techniques (2-3)
A study of stage lighting equipment and lighting practices.

DRA 3313 Creative Drama (2)
Study and application of the techniques of creative drama and children's theatre.

DRA 3315 Audition and Portfolio Techniques (1-2)
A study of the practices and tools of the actor/ designer/technician in the development of the professional audition. It includes the resume, headshot, interview, prepared monologues, and portfolio. *Prerequisite: DRA 3301, 2245, or permission of instructor.*

DRA 3316 Acting II (2-3)
A study of advanced concepts of acting, focusing on script analysis and character development along with further study of voice, movement, and scene dynamics. *Prerequisite: DRA 3301 and COM 2251 or permission of instructor.*

DRA 3321 Scenic Design (3-3)
The principles and techniques of drafting and designing in a variety of theatrical spaces. *Prerequi-*

site: DRA 2221 and completion of the DRA 2245 rotation or permission of the instructor.

DRA 3330 Special Topics in Theatre (1-3 hours variable credit)
Examination of selected topics in theatre not included in the established curriculum. Content may be of a historical, thematic, technological, design, or specialized performance nature. May be repeated for credit.

DRA 3331 Costume Design (3-3)
A study of the theory, principles, and techniques of costume design applied to a series of theatrical projects. *Prerequisite: Completion of the DRA 2245 rotation or permission of the instructor.*

DRA 3344 Lighting Design (3-3)
A study of the principles of lighting design and equipment applications. Also covers drafting techniques for lighting. *Prerequisite: DRA 3304 and completion of the DRA 2245 rotation or permission of the instructor.*

DRA 3345 Advanced Stagecraft Lab (1-3)
A continuation of Stagecraft Lab designed for the upper level student. *Prerequisites: DRA 2245 rotation or permission of instructor.*

DRA 3346 Educational Assessment (3)
This course provides a study of measurement and evaluation techniques for the secondary and P-12 teacher. Emphasis will be placed on the selection, evaluation, administration, scoring and interpretation of selected measures of student performance, achievement and behavior. The student will demonstrate skills in utilizing measurement data to plan appropriate learning activities for students. *Prerequisite: Admission to TEP.*

DRA 3350 Script Analysis (2-2)
Focuses on the nature of the text, playwright's purpose, dramatic structure, and style. The course will examine how the actor, director, designer, and technician approach a play and how that understanding translates into the staging.

DRA 3352 Sound Techniques (2-2)
A study of digital and analog recording techniques, recording equipment, and application.

DRA 3354 Rendering Techniques for the Theatre (2-2)
A study and application of traditional and experimental techniques for theatrical rendering, including watercolor, markers, pastels, pencils, and other media.

DRA 4441 Oral Interpretation (2-2)
Study and application of the principles and practices of oral interpretation (reading) of literature, including individual and ensemble performance. *Prerequisite: COM 2241 or permission of the instructor.*

DRA 4443 Theatre History I (3-3)
Through the study of literature and dramaturgy, this course traces the history of theatre from the origins of drama to English Restoration drama of the 18th century. *Prerequisite: Completion of ENG 2205.*

DRA 4444 Theatre History II (3-3)
Through the study of literature and dramaturgy, this course traces the history of the theatre from the 19th century to the present. *Prerequisite: Completion of ENG 2206*

DRA 4451 Directing I (3-3)
Script analysis and directing principles with studies in the direction of scenes from contemporary plays. *Prerequisite: DRA 3301.*

DRA 4452 Directing II (2-3)
Advanced study of directing, extending to period styles and culminating with the production of a one -act play. *Prerequisites: DRA 3301 and DRA 4451.*

DRA 4455 Theatre Senior Capstone (2)
Comprehensive exit assessment of student competencies in theatre. The student will develop a major field-related project, pass an exit exam, complete a program assessment and take the Praxis II in the theatre content area. Project proposals must be submitted prior to the semester in which they will be developed. Final grade will be determined by speech and theatre faculty.

DRA 4456 Developing an Educational Theatre Program (2)
Administration aspects of an educational theatre program (P-12) including scheduling, recruitment, appropriate use of support groups and partnerships, play selection, evaluation, purchase and maintenance of resource materials and equipment, business management, performance, co-curricular and extracurricular events such as festivals and competitions. Also include theatre careers and other opportunities utilizing theatre skills as well as national theatre standards for P-12. *Prerequisites: DRA 4451, junior status.*

DRA 4472 Internship in Grades P-12 (9)
The Professional Internship Program is the culminating clinical field-based experience for students seeking certification in a teaching field. The Professional Internship Program provides the student with the opportunity to conduct classes and assume the role of a teacher while receiving supervision from a classroom teacher and a university supervisor for a period of one full semester. The student will demonstrate skills of the informed, reflective decision maker throughout the internship experience. *Prerequisite: Admission to TEP. Corequisite: IED 4454.*

DRA 4481 Methods and Materials for the Theatre Teacher (3)
Teaching methods, selection, organization and use of theatre related materials and resources in grades P-12. Units of study will be categorized by grade levels. Observation and teaching experience will be

included. *Prerequisites: DRA 3313, 4456, EDU 3310, admission to TEP.*

DRA 4491-92 Guided Independent Research (1-3 credit hours per course)

Information is indexed under Independent Re search and Study in this catalog.

DRA 4493-94 Guided Independent Study (1-3 credit hours per course)

Information is indexed under Independent Research and Study in the catalog.

DRA 4496-97 Internship (3-6 credit hours per course)

An internship with a recognized professional theatre program or company in which the student is assigned specific tasks in one of the recognized areas of theatre arts. The number of credit hours earned will depend upon the number of hours contracted for in the internship agreement. The course is designed to give the student an opportunity for practical application of skills in theatre arts in a professional theatre setting. The student must apply and meet admission requirements.

INTERNATIONAL ECONOMIC DEVELOPMENT COURSES (ECD)

ECD 3360 Principles of International Economic Development (3)

This introductory course offers a global perspective on the theoretical concepts associated with economic growth and development.

ECD 3362 Applied Spatial Analysis for Business (3)

This introductory course prepares students to become decision makers able to analyze business data, both internal and external, from a spatial perspective utilizing geographic information systems software.

ECD 4461 Advanced Applied Spatial Analysis for Business (3)

This course prepares students to conduct advanced economic development-related research through the application of geographic information systems software. *Prerequisite: ECD 3362*

ECD 4499 Field Experiences in International Economic Development (3)

This course integrates academic knowledge with practical skills to develop professional abilities through economic development fieldwork. *Prerequisites: ECD 3360, 3362.*

EARLY CHILDHOOD EDUCATION COURSES (ECE)

ECE 3310 Portrait of a Learner: Logico-Mathematical Knowledge (3)

The purpose of this course is to assist students as they investigate and construct operational knowledge of young children's construction of logico-mathematical knowledge. This course includes extensive laboratory experiences where students interact with diverse learners through observation and participation in the application of appropriate logico-mathematical knowledge experiences including technology and the investigation and evaluation of children's thinking. *Prerequisite: Admission to the Teacher Education Program (TEP).*

ECE 3320 Portrait of a Learner: Physical Knowledge (3)

The purpose of this course is to assist students as they investigate and construct operational knowledge of young children's construction of physical knowledge. This course includes extensive laboratory experiences where students interact with diverse learners through observation and participation in the application of appropriate physical knowledge experiences including technology and the investigation and evaluation of children's thinking. *Prerequisite: Admission to TEP.*

ECE 3330 Portrait of a Learner: Social and Moral Development (3)

The purpose of this course is to assist undergraduate students as they investigate and construct operational knowledge of children's social development. In addition, the undergraduate will interact with diverse learners through observation and participation in the application of appropriate social development experiences, including technology along with the investigation and evaluation of children's construction of social knowledge. *Prerequisite: Admission to TEP.*

ECE 3340 Portrait of a Learner: Language Acquisition (3)

The purpose of this course is to assist students as they investigate and construct an operational knowledge of young children's language and literacy acquisition. This course includes extensive laboratory experiences where students interact with diverse learners through observation and participation in the application of appropriate language and literacy experiences including technology. *Prerequisite: Admission to TEP.*

ECE 3350 Portrait of a Learner: Symbolic Function (3)

The purpose of this course is to assist students as they investigate and construct operational knowledge of young children's symbolic thought and representation through play, art, music, movement and drama. This course includes extensive laboratory experiences where students interact with diverse learners through observation and participation in the application of appropriate expressive arts experiences including technology and the investigation of children's representation of their knowledge. *Prerequisite: Admission to TEP.*

ECE 4401 The Integrated Program (3)

This course is designed as a culminating course for Early Childhood Education students to examine the integrated nature of the ECE program. This course includes extensive laboratory experiences where students interact with diverse learners as they plan, implement, and evaluate integrated curriculum, including technology, and the total ECE program.

Prerequisite: Admission to TEP and completion of a minimum of 15 hours in the teaching field.

ECE 4454 Internship Seminar for Early Childhood Education (3)
This course provides seniors an opportunity during internship to examine broad educational issues and concerns, topics on the state and local levels and those of personal interest. The scope of the course ranges from juvenile law, classroom management professionalism, professional development for teachers and other course topics. *Prerequisite: Admission to TEP; Co-requisite: ECE Internship.*

ECE 4465 Early Childhood Education Internship (1-3)
Experiences in internship, i.e., observation, participating and teaching with supervision. Twenty-five clock hours for each credit hour. *Prerequisite: Completion of all courses required by the State Department of Education and the approval of the Director of Professional Laboratory Experiences.*

ECE 4466 Early Childhood Education Internship (6)
Half-day observing and teaching under supervision. *Prerequisite: Holder of an Alabama Class B Teacher Certificate; successful completion of two years teaching experience in grades P-3; completion of all courses required for certification in Early Childhood Education and approval of the Director of the Professional Internship Program.*

ECE 4474 Internship in Early Childhood Education (9)
The Professional Internship Program is the culminating clinical field-based experience for students seeking certification in a teaching field. The Professional Internship Program provides the student with the opportunity to conduct classes and assume the role of a teacher while receiving supervision from a classroom teacher and a university supervisor for a period of one full semester. The student will demonstrate skills of the informed, reflective decision maker throughout the internship experience. *Prerequisite: Admission to TEP; Co-requisite: ECE 4454.*

ECE 4491–4492 Guided Independent Research(1-3)
Additional information is indexed under Guided Independent Research and Study.

ECONOMICS COURSES (ECO)

ECO 2251 Principles of Macroeconomics (3)
Macroeconomic theory of the national economy with emphasis on income, employment, banking, and public policy.

ECO 2252 Principles of Microeconomics (3)
Microeconomic theories of value, production, distribution of income, and basic international economic analysis.

ECO 2270 Personal Finance and Economics (3)
Business economics and personal finance in modern society.

ECO 3353 Money and Banking (3)
Principles of money, credit, and banking including monetary systems, theories, and commercial banking operations related to the Federal Reserve System. *Prerequisite: ECO 2252.*

ECO 3355 Labor Economics (3)
Employment, unionism, labor-management relations and human capital. *Prerequisite: ECO 2252.*

ECO 3357 Managerial Economics (3)
Theory and determination of prices. *Prerequisite: ECO 2252.*

ECO 3358 Macroeconomics for Managers (3)
An analysis of economic growth, income, employment and price levels. *Prerequisite: ECO 2252.*

ECO 4451 International Trade (3)
Principles underlying international trade and international finance. *Prerequisite: ECO 2252.*

ECO 4453 Public Finance (3)
An analysis of the principles underlying government expenditure and taxation programs presented from both a theoretical and a pragmatic perspective. *Prerequisite: ECO 2252.*

ECO 4555 Comparative Economic Systems (3)
An analysis of the economic systems of capitalism and socialism focusing upon how a multitude of specific nations in the Americas, Europe, and Asia, such as the United States, Mexico, Germany, Poland, Japan, and China, et al., arrange and conduct economic affairs in the 21st century. *Prerequisite: ECO 2251 or ECO 2252.*

ECO 4459 Economics Seminar (3)
Current problems in economics. *Prerequisite: ECO 2252.*

EDUCATION COURSES (EDU)

EDU 2200 Introduction to Interpreting: Professional Identity and Ethical Considerations (3)
Introduces basic principles and practices of interpreting, professional orientation and identity, including history of the profession and the Code of Ethics. Ethical decision-making models are introduced and professional certification and licensure are described. *Prerequisite: ASL 2242 or Intermediate on the SCPI or permission of instructor.*

EDU 3305 Microcomputers in Education (3)
This course is designed to introduce prospective teachers to currently available technology and to prepare them to use various media for their own education as well as in their professional careers. Students are expected to become comfortable in the use of various media and to explore the possibilities for the use of media in the classroom. Emphasis is

given to ways in which multimedia can be used to meet the needs of the varying learning styles.

EDU 3310 The Professional Educator (3)
This course provides a broad overview of education, teaching and schools, and an orientation to the Teacher Education Program. Multiple field experiences in school settings are required as part of the course. *This is a prerequisite course for most other education courses.*

EDU 3360 Models of Interpretation / Transliteration (3)
Students will be introduced to various interpreting models, including the Process Model, the Cokely Model, and the Colonomos Model. Students will use the models to analyze interpretations. Self-assessment techniques will be taught and Demand-Control theory will be introduced. *Prerequisite: Permission of instructor.*

EDU 3362 Manual Codes for English (3)
Focuses on the communication modes typically used by deaf children in public schools. Studies involve various manual codes for English such SEE II and Conceptually Accurate Signed English (CASE), Pidgin Signed English, and the Rochester Method. Simultaneous communication skills are developed. *Prerequisite: ASL 1142 or SCIP rating of Survival Plus or permission of instructor.*

EDU 3364 Introduction to Educational Interpreting/ Transliterating (3)
This course surveys the field of interpreting in educational settings. The focus of the course is on an analysis of the educational environment's impact on the deaf/hard of hearing student and the myriad roles of an interpreter in these settings. Guidelines of professional conduct are presented and specialized subject vocabulary is introduced. Prerequisites: ASL 2242, EDU 2200 and 3362; or permission of instructor.

EDU 3366 Discourse Analysis I (3)
Introduces the concept of discourse analysis as it relates to ASL and English. Transcriptions and analysis of text will be the focuses. *Prerequisite: ASL 2242 or SCPI Intermediate Plus or permission of instructor.*

EDU 3368 Interpreting in Specialized Settings (3)
An introductory course which provides an overview of the ethical considerations, specialized vocabulary and skills needed to interpret in special settings such as performing arts, conferences, legal settings, phone relay, religious and health settings. *Prerequisites: EDU 2200, 3360 and 3366; or permission of instructor.*

EDU 4400 Classroom Management (3)
This course is designed for all education majors. The purpose of this course is to establish a foundation of content and application relative to classroom management and discipline, emphasizing reflection, decision making, and integrated teaching/learning strategies. Methodologies utilized will include discussion, lecture, field experience, case studies, problem solving sessions, projects, and research.

EDU 4451 ASL/English Linguistics (3)
This course is designed to introduce the linguistics of ASL, including phonology, morphology, syntax and semantics. Geographical, generational, racial and gender differences are explored. English and ASL similarities and differences are highlighted. *Prerequisite: ASL 2242; Advanced Level on SCPI; or permission of instructor.*

EDU 4452 Discourse Analysis II (3)
Students will develop a better understanding of the broad methodological areas of discourse analysis and conversation analysis as an approach for understanding signed languages and English, particularly in the context of interpreting. *Prerequisite: EDU 3366*

EDU 4453 Interpreting English to ASL (3)
Theory-to-practice course in which interpreter trainees are required to analyze message input from the source language (English), process and produce an equivalent message in the target language (ASL). Auditory and cognitive processing skills are refined. *Prerequisite: ASL 2242 or Advanced on the SCPI or permission of instructor.*

EDU 4454 Interpreting ASL to English (3)
Theory-to-practice course in which interpreter trainees are required to analyze message input from the source language (ASL), process and produce an equivalent message in the target language (English). Auditory and cognitive processing skills are refined. *Prerequisite: ASL 2242 or Advanced on the SCPI or permission of instructor.*

EDU 4455 Transliteration (3)
Focuses on expressive and receptive transliterating skill development in English and manual Codes for English with attention to setting and register. *Prerequisites: ASL 2242, EDU 2200 and 3362; or Advanced Level on SCPI; or permission of instructor.*

EDU 4456 Advanced Voice to Sign Interpreting / Transliterating (3)
Focuses on interpreting/transliterating from spoken English to ASL or Manual Codes for English. *Prerequisites: ASL 2242; Intermediate Plus level on SCPI; or permission of instructor.*

EDU 4457 Advanced Sign to Voice Interpreting/ Transliterating (3)
Focuses on interpreting/transliterating from ASL or Manual Codes for English to spoken English. Students develop appropriate use of register and cross-cultural bridging techniques. *Prerequisites: ASL 2242; Intermediate Plus level on SCPI; or permission of instructor.*

EDU 4458 Advanced Interactive Interpreting (3)
Course focuses on consecutive and simultaneous interpreting and transliterating. Students will de-

velop skills in team interpreting in interactive settings. *Prerequisites: ASL 2242, EDU 2200 and 3360; or* Advanced Level on SCIP; or permission of instructor.

EDU 4462 Practicum I: Seminar and Field Experiences (3)
This is a field experience course in which interpreter trainees have the opportunity to interview, observe, interact with and shadow interpreters in public venues. *Prerequisite: Completion of coursework.*

EDU 4463 Practicum II: Seminar and Field Experiences (3)
This is a field experience course in which interpreter trainees have the opportunity to team interpret with credentialed interpreters. Trainees will interpret in one-on-one situations for which they are qualified. *Prerequisite: EDU 4462*

EDU 4465 Internship: Educational Interpreting (6)
The internship provides an opportunity for the student to perform, under supervision, a variety of activities that a regularly employed interpreter would be expected to perform in an educational setting. The interpreter-in-training is involved in assignments appropriate to his/her skill level and training. Interns receive feedback and supervision from on-site supervisors, group seminar supervisors and faculty members. Interns are assigned to an educational setting (k-12 or postsecondary) for 300 clock hours, 120 of which must be in direct interpreting service. *Prerequisite: completion of coursework*

EDU 4466 Internship: Community Interpreting (6)
The internship provides an opportunity for the student to perform, under supervision, a variety of activities that a regularly employed interpreter would be expected to perform in a community setting. A regularly employed interpreter is defined as a person occupying the professional interpreting role to which the student is aspiring. The interpreter-in-training is involved in assignments appropriate to his/her skill level and training. Interns receive feedback and supervision from on-site supervisors, group seminar supervisors and faculty members. Interns are assigned to an agency or rehabilitation setting for 300 clock hours, 120 of which must be in direct interpreting service. *Prerequisite: completion of coursework*

EDU 4471 Curriculum and Instructional Delivery (3)
This course offers a survey of school curricula, organizational patterns for school systems and classrooms. It is designed for Early Childhood Education, Elementary Education, Special Education, and Middle and Secondary Education majors. Various instructional strategies, major philosophies and learning theories are examined. *Prerequisite: Admission to TEP; class should be taken semester prior to internship.*

EDU 4476 Internship in Elementary/K-6 Collaborative Teacher (9)
The Professional Internship Program is the culminating clinical field-based experience for students seeking certification in a teaching field. The Professional Internship Program provides the student with the opportunity to conduct classes and assume the role of a teacher while receiving supervision from a classroom teacher and a university supervisor for a period of one full semester. The student will demonstrate skills of the informed, reflective decision maker throughout the internship experience. *Prerequisite: Admission to TEP. Corequisite: ELE 4454.*

EDU 4491-4492 Guided Independent Research (1-3)
Undergraduate research with attention to critical evaluation of research techniques, methods and procedures. *Prerequisites: junior or senior standing with a minimum overall GPA of 3.0, permission of guiding professor, approval of department chairperson or dean. A written request is to be submitted to the department chairperson at least two weeks in advance of the term in which study is to be undertaken. May not be used to repeat a course for which a grade of D or below has been earned. Application forms are available in the Office of University Records. Guided independent research may be taken only in the applicant's major or minor field. Also see index for "Independent Study and Research."*

EDU 4493-4494 Guided Independent Study (1-3)
Supervised study through field or laboratory projects, guided readings, creative endeavors or achievement of specific skills. *Prerequisites: junior or senior status, permission of guiding professor, approval of department chairperson and the dean. A written request is to be submitted to the department chairperson at least two weeks in advance of the term in which study is to be undertaken. May not be used to repeat a course for which a grade of D or below has been earned. Also see index for "Independent Study and Research."*

EDU 4499 Technology Across the Curriculum (3)
This course prepares the student to use a variety of technologies in developing curriculum and planning instruction for diverse learners in grades K-6. Attention is given to the history of technology, software selection and the integration of technology into the curriculum by matching technology resources and tools to instructional needs.

ELEMENTARY EDUCATION COURSES (ELE)

ELE 3360 Teaching Social Science in the K–6 Classroom (3)
This course provides a study of the varied dimensions of instruction in social sciences. Emphasis is placed on appropriate instruction and resources, including technology for the instruction of students in grades K-6. *Prerequisite: Admission to TEP.*

ELE 3361 Teaching Natural Science in the K-6 Classroom (3)
This course provides a study of the varied dimensions of instruction in natural sciences. Emphasis is placed on appropriate instruction and resources, including technology for the instruction of students in grades K-6. *Prerequisite: Admission to TEP.*

ELE 3362 Teaching Mathematics in the K-6 Classroom (3)
This course provides a study of the varied dimensions of instruction in mathematics. Emphasis is placed on appropriate instruction and resources, including technology for the instruction of students in grades K-6. *Prerequisites: Admission to TEP, completion of MTH 2251 and 2252 with a grade of C or better.*

ELE 4401 Integrated Program (3)
This course is designed as a culminating course for Elementary Education students to examine the integrated nature of the ELE program. This course includes extensive laboratory experiences where students interact with diverse learners as they plan, implement, and evaluate integrated curriculum including technology and the total ELE program. *Prerequisite: Admission to TEP and completion of a minimum of 15 hours in the teaching field.*

ELE 4454 Internship Seminar for Elementary Education (3)
This course provides seniors an opportunity during internship to examine broad educational issues and concerns, topics on the state and local levels and those of personal interest. The scope of the course ranges from juvenile law, classroom management professionalism, professional development for teachers and other course topics. *Prerequisite: Admission to TEP. Co-requisite: ELE Internship.*

ELE 4474 Internship in Elementary Education (9)
The Professional Internship Program is the culminating clinical field-based experience for students seeking certification in a teaching field. The Professional Internship Program provides the student with the opportunity to conduct classes and assume the role of a teacher while receiving supervision from a classroom teacher and a university supervisor for a period of one full semester. The student will demonstrate skills of the informed, reflective decision maker throughout the internship experience. *Prerequisite: Admission to TEP. Co-requisite: ELE 4454.*

ELE 4491-4492 Guided Independent Research (1-3)
Undergraduate research with attention to critical evaluation of research techniques, methods and procedures. *Prerequisites: junior or senior standing with a minimum overall GPA of 3.0, permission of guiding professor, approval of department chairperson or dean. A written request is to be submitted to the department chairperson at least two weeks in advance of the term in which study is to be undertaken. May not be used to repeat a course for which a grade of D or below has been earned. Application forms are available in the Office of University Records. Guided independent research may be taken only in the applicant's major or minor field. Also see index for "Independent Study and Research."*

ELE 4493-4494 Guided Independent Study (1-3)
Supervised study through field or laboratory projects, guided readings, creative endeavors or achievement of specific skills. *Prerequisites: junior or senior status, permission of guiding professor, approval of department chairperson and the dean. A written request is to be submitted to the department chairperson at least two weeks in advance of the term in which study is to be undertaken. May not be used to repeat a course for which a grade of D or below has been earned. Also see index for "Independent Study and Research."*

ENGLISH COURSES (ENG)

ENG 0096 Fundamentals of Grammar and Sentence Writing (3)
Developmental instruction in the basic elements of standard American English grammar, with an introduction to the essentials of effective written communication. Involves application of appropriate computer software. Students are placed in this course, ENG 1100 or ENG 1101, depending on placement exam score; see the local campus testing center for specific cut-off scores. Students may also be required to attend weekly sessions at a writing and/or computer center. Note: Under no circumstance may this course be used to substitute for any general studies requirement; nor may it be used to meet minimum degree requirements. Grade of C or better and successful completion of exit exam required.

ENG 1100 Preparatory English (3)
Developmental instruction in composition and mechanical skills needed to write clear, effective sentences and paragraphs. Involves application of appropriate computer software and a variety of written activities. Students are placed in this course, ENG 0096, or ENG 1101 depending on placement exam score; see the local campus testing center for specific cut-off scores. Students may also be required to attend weekly sessions at a writing and/or computer center. Note: Under no circumstances may this course substitute for any general studies requirement; nor may it be used to meet minimum degree requirements. Grade of C or better required.

ENG 1101 Composition And Modern English I (3)
Intensive instruction in the writing process. Focuses on organization of ideas in well-developed expository and argumentative essays (usually 6 to 8 essays), with stress on grammar, punctuation, and vocabulary development. A grade of C or better is required for credit. Must be completed within first 30 hours of enrollment. *Prerequisite: Placement Testing.*

ENG 1102 Composition and Modern English II (3)
Text-based analyses and application of principles and tools of research in writing short research papers. A grade of C or better is required for credit. Must be taken within first 30 hours of enrollment. *Prerequisite: ENG 1101 or equivalent*

ENG 1103 Honors English Composition I (3)
Introductory study and practice of composition for the superior student. *(Prerequisite: Minimum English score of 27 on the ACT or 640 on the SAT, or recommendation by an 1101 instructor*

ENG 1104 Honors English Composition II (3)
Continuation of study and practice of composition for the superior student. *Prerequisite: Minimum grade of C in ENG 1103 or recommendation by a 1101 or 1102 instructor*

ENG 1150 Basic Study Techniques (1)
Presentation of and practice in basic study techniques, including strategies for planning personal success, outlining materials, studying for tests, and taking tests.

ENG 2205 World Literature before 1660 (3)
Introduction to attitudes, philosophies, and reflections of life in world literary masterpieces from the ancient world, Middle Ages, and Renaissance. Requires demonstration of acceptable writing skills. *Prerequisite: ENG 1102 or equivalent*

ENG 2206 World Literature after 1660 (3)
Introduction to attitudes, philosophies, and reflections of life in world literary masterpieces from the Enlightenment to the present. Requires demonstration of acceptable writing skills. *Prerequisite: ENG 1102 or equivalent*

ENG 2207 Honors World Literature before 1660 (3)
A course for the superior student, focusing on representative selections of the world's dramatic masterpieces in prose and poetry. *Prerequisite: ENG 1104 or permission of department chair*

ENG 2208 Honors World Literature after 1660 (3)
A course for the superior student, focusing on representative selections of the fictional masterpieces in Western literature. *Prerequisite: ENG 1104 or permission of department chair*

ENG 2210 Word Origins and Usage (2)
Discussion of principal ways by which words enter English language. Emphasizes learning prefixes, roots, and suffixes. Requires memorizing much material.

ENG 2211 American Literature before 1875 (3)
Study of works of selected writers in various American traditions and styles from colonial times to 1875. *Prerequisite: ENG 1102 or equivalent*

ENG 2212 American Literature after 1875 (3)
Study of works of selected writers in various American traditions and styles from 1875 to the present. *Prerequisite: ENG 1102 or equivalent*

ENG 2219 Literature and Scholarship (2)
Philosophy and practice of literary scholarship, including basic tools and methods of literary research.

ENG 2225 Thematic Approaches to Literature (3)
An exploration of major themes in the literatures of various cultures, across historical periods and in a variety of genres. The course will focus on a selected topic. *Prerequisite: ENG 1102 or equivalent*

ENG 2244 British Literature before 1785 (3)
A survey of British literature from its beginning to 1785. *Prerequisite: ENG 1102 or equivalent*

ENG 2245 British Literature after 1785 (3)
A survey of British literature from 1785 to the present. *Prerequisite: ENG 1102 or equivalent*

ENG 2260 Introduction to Technical and Professional Writing (3)
Technical communications for science, business, and professional work. Emphasis on writing for specific purposes to particular audiences in an organizational setting. Preparation of documents such as technical description of a mechanism or process, instructions, recommendations, reports, and resumes. *NOTE: course is a prerequisite for all required 3300- and 4400-level courses in the Professional Writing Emphasis. Students may take elective courses concurrently with this course.*

ENG 2265 History of the American Cinema (3)
A study of the history and development of the American cinema from its inception (c. 1895) to the end of the studio system (c. 1945). Emphasis will be on social and historical ramifications, on appreciation of film as a literary and art form, and on the major pioneers and contributors to the American movies. *Prerequisite: 6 semester hours of 2000-level English courses*

ENG 3301 Women's Literature (3)
Representative works of literature by women. *Prerequisite: 6 semester hours of 2000-level English courses*

ENG 3303 Writing across the Disciplines (3)
An advanced study of writing expository, nonfiction prose which focuses on a variety of academic disciplines. NOTE: This course may not be used to meet English degree requirements but may be taken for free elective credit. *Prerequisite: 6 semester hours of 2000-level English courses*

ENG 3305 Folklore/Mythology (3)
A multicultural survey of the forms and varieties of the mythology and folklore of major western cultures, emphasizing stories of Scandinavian, German, British, and American origin, and the application of these forms in modern cultures and literature. This course is recommended for English teachers seeking middle school certification. *Prerequisite: 6 semester hours of 2000-level English courses*

ENG 3310 Fiction and Film (3)
Representation of fiction on film, with attention to visual techniques and the translation and representation of major literary themes. *Prerequisite: 6 semester hours of 2000-level English courses*

ENG 3315 Modern Drama (3)
Study of plays written between 1900 and the present. List of plays may vary with each offering.

Prerequisite: 6 semester hours of 2000-level English courses

ENG 3320 Introduction to Linguistics (3)
Overview to linguistics, the scientific study of language. The course will acquaint students with the grammatical, social, biological, and technological applications of language. *Prerequisites: ENG 1101, 1102*

ENG 3326 Science Fiction (3)
An exploration of the literary, social, and generic importance of science fiction. *Prerequisite: 6 semester hours of 2000-level English courses*

ENG 3341 Advanced Grammar (3)
Detailed study of the structural system of English grammar. *Prerequisite: 6 semester hours of 2000-level English courses*

ENG 3345 Technical and Professional Editing (3)
Principles and practices of editing technical and scientific documents. Overview of the editing process; defining the editor's rules and responsibilities, revising at structural and sentence levels, and addressing stylistic conventions of technical fields. Includes technical and scientific documents such as reports, proposals, and user manuals. *Prerequisite: ENG 2260 or permission of instructor.*

ENG 3351 Introduction to Creative Writing I (3)
Practice in writing poetry, short stories, and/or plays, along with a concentrated study of the techniques and principles of creative writing in each genre. *Prerequisite: 6 semester hours of 2000-level English courses*

ENG 3352 Advanced Creative Writing I (3)
Continued practice in writing poetry, short stories, and/or plays, along with a more advanced study of the techniques and principles of creative writing in each genre. *Prerequisite: 6 semester hours of 2000-level English courses; ENG 3351 or permission of instructor*

ENG 3353 Advanced Creative Writing II (3)
Practice in writing poetry, short fiction, or plays for class and instructor evaluation. *Prerequisite: 6 semester hours of 2000-level English courses; ENG 3351 or permission of instructor*

ENG 3354 Advanced Nonfiction Writing (3)
The literature of fact. Emphasis on student writing and analysis of nonfiction forms, such as personal narrative, autobiography, lyric in prose, and New Journalism. *Prerequisite: 6 semester hours of 2000-level English courses; ENG 3351 or permission of instructor*

ENG 3355 Verse Writing (3)
Development of techniques in the practice of poetry, including expression through metrical patterns, rhyme, rhythm, imagery, metaphor, and symbolism. *Prerequisite: 6 semester hours of 2000-level English courses; ENG 3351 or permission of instructor*

ENG 3356 Form and Theory of Fiction (3)
Primarily a reading course for writers. Examination of the classic texts of literary theory; analysis of the use and purpose of the elements of fiction; and discussion of fiction form, from the short-short to hyper-text. *Prerequisite: 6 semester hours of 2000-level English courses*

ENG 3357 Form and Theory of Nonfiction Literature (3)
Examination of the theories behind various forms of nonfiction literature, whether autobiography, biography, the essay, diaries, and/or travel writing, with special emphasis on the historical evolution of a particular form. List of readings will vary with each course offering. *Prerequisite: 6 semester hours of 2000-level English courses*

ENG 3361 Children's Literature (3)
Literature for children. *Prerequisite: 6 semester hours of 2000-level English courses. NOTE: No credit toward English major or minor.*

ENG 3362 The Arthurian Legend through the Ages (3)
Examination of Arthur not only in literary and historical works from its earliest traces in the Middle Ages to the present, but also in archaeology, the visual and decorative arts (especially painting and sculpture), manuscript decoration, film, musical, and opera. *Prerequisite: 6 semester hours of 2000-level English courses*

ENG 3365 Advanced Technical and Professional Writing (3)
Study of technical communication as a dynamic process in organizational and social environments, including the manner in which organizational hierarchies, purposes, and stylistic conventions interact with the writing process. Professional literature and professional associations concerned with improving communications within students' disciplines. *Prerequisite: ENG 2260 or permission of instructor.*

ENG 3366 Professional Document Design (3)
Overview of the fundamental concepts and techniques of information design and production for both print and online documents, including the coordination of text, typography, and graphics; principles of audience analysis, usability, and readability; and an introduction to computer software for desktop publication and web design. *Prerequisite: ENG 2260 or permission of instructor.*

ENG 3371 Literature for Adolescents (3)
Principles of and practice in the selection of literature for upper-elementary and for junior and senior high school students, with attention given to multicultural literature. *Note: No credit toward English major or minor. Credit applied only to middle school education certification program in English. Prerequisite: 6 semester hours of 2000-level English courses*

ENG 4400 Selected Topics in Literature and/or Professional Writing (3)
Study of a topic of special interest and importance not covered in regularly offered courses in English. *Prerequisite: 6 semester hours of 2000-level English courses*

ENG 4401 Chaucer (3)
Study of Chaucer's major poetry. *Prerequisite: 6 semester hours of 2000-level English courses*

ENG 4402 Studies in Medieval Literature (3)
Study of non-Chaucerian British literature from the Middle Ages, including Beowulf, Piers Plowman, Sir Gawain and the Green Knight, mystery plays, Le Morte d'Arthur, and other works. *Prerequisite: 6 semester hours of 2000-level English courses*

ENG 4403 English Renaissance Literature (3)
English prose and poetry of the 16th and 17th centuries with an emphasis on Sidney, Spenser, Donne, and Jonson. *Prerequisite 6 semester hours of 2000-level English courses*

ENG 4404 Milton (3)
Milton's poetry and major prose. *Prerequisite: 6 semester hours of 2000-level English courses*

ENG 4405 History of the English Language (3)
Study of the development of English from the Anglo-Saxon period through the present, with reference to the Indo-European background of English. *Prerequisite: 6 semester hours of 2000-level English courses*

ENG 4406 Studies in British Literature Before 1660 (3)
Selections from Medieval and/or Renaissance British literatures, including classical, historical, and cultural background. *Prerequisite: 6 semester hours of 2000-level English courses*

ENG 4410 Studies in Eighteenth-Century British Literature (3)
Selections from Restoration and 18th-century British literature and its historical and cultural background. *Prerequisite: 6 semester hours of 2000-level English courses*

ENG 4413 Studies in Nineteenth-Century British Literature (3)
Study of Romantic and/or Victorian literatures. *Prerequisite: 6 semester hours of 2000 level English courses*

ENG 4414 British Novel Before 1900 (3)
Representative novels by British writers of the 18th and 19th centuries. *Prerequisite: 6 semester hours of 2000-level English courses*

ENG 4415 American Renaissance (3)
Selections from the major writers of the American literary renaissance, including such writers as Emerson, Thoreau, Hawthorne, Melville, Whitman, and Dickinson. *Prerequisite: 6 semester hours of 2000-level English courses*

ENG 4416 Nineteenth-Century American Novel (3)
Study of representative American novels of the 19th century. *Prerequisite: 6 semester hours of 2000-level English courses*

ENG 4417 Modern Short Story (3)
Examination of 20th and 21st century short stories. List of stories may vary with each offering. *Prerequisite: 6 semester hours of 2000-level English courses*

ENG 4418 British Culture on Location (3)
An intensive presentation of British culture on-site in London, Oxford, and other important British locations.

ENG 4419 Advanced Writing (3)
Provides students the opportunity to write, review, and evaluate texts relevant to the professions they plan to enter and to apply rhetorical analysis to specific writing situations. *Prerequisite: 6 semester hours of 2000-level English courses*

ENG 4420 Selected Topics in Creative Writing (3)
Study of a topic of special interest and importance not covered in regularly offered courses in creative writing. *Prerequisites: Six semester hours of 2200-level English courses; ENG 3351 or permission of instructor. Note: may be taken for credit no more than two times.*

ENG 4421 English Novel (3)
Selected 18th, 19th, and 20th century novels written in English. *Prerequisite: 6 semester hours of 2000-level English courses*

ENG 4422 Dramaturgy I (3)
Study of selected classical, period, and contemporary plays, with emphasis on dramatic techniques, character development, and production. List of plays may vary with each offering. May require attending local productions during rehearsal and regular performances. *Prerequisite: 6 semester hours of 2000-level English courses.*
NOTE: Only one dramaturgy course may be used in English major or minor.

ENG 4423 Dramaturgy II (3)
Continuation of study of selected classical, period, and contemporary plays, with emphasis on dramatic techniques, character development, staging, and production. List of plays may vary with each offering. May require attending local productions during rehearsal and regular performances. *Prerequisite: 6 semester hours of 2000-level English courses. NOTE: Only one dramaturgy course may be used in English major or minor.*

ENG 4425 Modern Novel (3)
Study of representative novels written in English in the 20th and 21st centuries. *Prerequisites: 6 semester hours of 2000-level English courses*

ENG 4426 Modern Poetry (3)
Study of 20th- and 21st-century poetry. *Prerequisite: 6 semester hours of 2000-level English courses*

ENG 4427 Contemporary American Literature (3)
Examination of representative American literature from the postmodern period (1960-present), with special emphasis on the diversity of themes, styles, and cultural contexts influencing the literary marketplace. Course readings may vary with each offering. *Prerequisite: 6 semester hours of 2000-level English courses*

ENG 4428 The Age of Johnson (3)
A study of the works of Samuel Johnson and of his most important contemporaries, from about 1745 to 1798. *Prerequisite: 6 semester hours of 2000-level English courses*

ENG 4430 Shakespeare I: The Tragedies (3)
Study of major and minor tragedies, with some attention to non-dramatic poetry. List of plays may vary with each offering. *Prerequisite: 6 semester hours of 2000-level English courses*

ENG 4431 Shakespeare II: The Comedies (3)
Study of comedies and romances. List of plays may vary with each offering. *Prerequisite: 6 semester hours of 2000-level English courses*

ENG 4432 Shakespeare III: The Histories (3)
Study of history plays, especially those concerning Wars of the Roses. List of plays may vary with each offering. *Prerequisite: 6 semester hours of 2000-level English courses*

ENG 4433 Literary Criticism (3)
Study of the major literary critics and their works from classical times to the present. *Prerequisite: 6 semester hours of 2000-level English courses*

ENG 4434 Romantic Period in English Literature (3)
Romantic prose and poetry with emphasis on the writings of Blake, Coleridge, Wordsworth, Byron, Keats, and Shelley. *Prerequisite: 6 semester hours of 2000-level English courses*

ENG 4435 The Bible as Literature (3)
A detailed study of the literary components, composition techniques, and inclusion factors ins elected works from the New and Old Testaments. *Prerequisite: Six semester hours of 2200-level ENG courses.*

ENG 4443 Southern Literature (3)
Study of works by writers from the American South from colonial times to the present. *Prerequisite: 6 semester hours of 2000-level English courses*

ENG 4452 Medieval and Renaissance English Drama (3)
Survey of drama from the middle ages and Renaissance, excluding Shakespeare. Begins with brief study of folk and liturgical origins of drama, includes a few medieval mystery and morality plays, and features Renaissance plays by Heywood, Udall, Kyd, Marlowe, Beaumont, Fletcher, Jonson, and Webster. *Prerequisite: 6 semester hours of 2000-level English courses*

ENG 4453 English Drama through the 18th Century (3)
English drama (excluding Shakespeare) from the 9th through the 18th century. *Prerequisite: 6 semester hours of 2000-level English courses*

ENG 4460 Victorian Poetry (3)
A study of Victorian poetry, with emphasis upon the works of Tennyson, Browning, Arnold, and Hardy. *Prerequisite: 6 semester hours of 2000-level English courses*

ENG 4461 Victorian Prose (3)
A survey of the works of major Victorian prose writers, with emphasis upon the works of Carlyle, Newman, Mill, Ruskin, Arnold, and Pater. *Prerequisite: 6 semester hours of 2000-level English courses*

ENG 4465 African American Literature (3)
Study of the major African American writers from the beginning of American history to the present. *Prerequisite: 6 semester hours of 2000-level English courses*

ENG 4474 Internship in English/Language Arts Education (9)
The Professional Internship Program is the culminating clinical field-based experience for students seeking certification in a teaching field. The Professional Internship Program provides the student with the opportunity to conduct classes and assume the role of a teacher while receiving supervision from a classroom teacher and a university supervisor for a period of one full semester. The student will demonstrate skills of the informed, reflective decision maker throughout the internship experience. *Prerequisite: Admission to TEP. Corequisite: SED 4454.*

ENG 4478 Theory and Practice of Composition: Writing and Learning Across the Curriculum (3)
A study of the methodology of teaching English composition and practice in advanced writing techniques. *Prerequisites: Six semester hours of 2000-level English courses.*

ENG 4481 Methods and Materials for the Secondary Teacher (3)
A survey of teaching methods and materials appropriate for teaching in the content areas for grades 6-12. Topics addressed will include teacher evaluation in the public schools, collaboration with special education teacher evaluation in the public

schools, collaboration with special education teachers, and lesson planning formats. In addition, teaching methods, selections organization and use of English language arts materials for grades 6-12 will be covered in detail. A professional laboratory experience is included in this course. *Prerequisite: Admission to TEP.*

ENG 4488 Seminar in Professional Writing Portfolio Development (3)
Senior seminar. and development of a professional portfolio containing carefully selected materials that demonstrate seniors' mastery of specific writing capabilities and skills. *Prerequisite: senior class standing, ENG 2260, and completion of at least three required courses and three electives in the major, or permission of instructor*.

ENG 4489 Internship (3)
Practical experience involving writing and editing skills while working under the supervision of the Alabama Literary Review staff. *Prerequisite: ENG 3352-3353 or permission of instructor*

ENG 4490 Professional Writing Internship (3)
Writing Practicum/Internship at a local industry, publisher, arts or public agency. Provides workplace experiences in solving problems in writing, including those of career preparation and development. *Prerequisite: ENG 2260, and completion of at least three required courses and three electives in the major, or permission of instructor.*

ENG 4491-94 Guided Independent Research and Study (3)
Thorough examination of material on a selected subject, requiring a documented research paper. Additional information indexed under "Guided Independent Research and Study." *Prerequisite: 6 semester hours of 2000-level English courses) Note: Students who need regimentation of regular classroom to do good academic work should not attempt these courses. Also see index for "Independent Study and Research."*

ENG 4495 Senior Seminar in English (3)
A senior-level course capstone designed to engage the student with the central questions of literary studies and to develop the student's skills in critical thinking and writing and in research. *Prerequisite: Senior status*.

ENG 4498-4499 Honors Research and Writing (1 credit hour per semester per course–TBA)
The above courses are designed for outstanding students majoring in English. Taken collectively, they constitute the English upper-level honors program in which students may specialize in a selected area of literary study. Upon successful completion of all course work and other requirements, the student will be recognized as a graduate with English honors. *Prerequisite: Junior or senior level, grade point average no less than 3.2 in English studies and completion of the English honors application procedure. Consult the department chair for additional information.*

ENGLISH AS A SECOND LANGUAGE COURSES (ESL)

For more information, see the index for English as a Second Language Program.

ESL 0060 Pronunciation I *For beginners or near beginners.*
Intensive practice in sound production and differentiation (English vowels, consonants, diphthongs, and consonant clusters) as well as syllable stress, word stress, and intonation patterns. Uses word games, textbook activities, recordings, and software.

ESL 0061 Pronunciation II *For intermediate students.*
Remedial work for students with speech irregularities. Includes sound production and differentiation, syllable stress, word stress, intonation patterns, contractions, reductions, linking, assimilation, and fast speech phenomena. Uses word games, textbook activities, recordings, and software.

ESL 0070 Guided Independent Listening *For any level.*
Supervised independent skill-building practice at an appropriate level, using TV, radio, sound recordings, video, and software.

ESL 0071 Guided Independent Reading *For any level.*
Supervised independent study at an appropriate level, designed to develop specific reading skills and increase vocabulary. Materials may include books, newspapers, magazines, CDs, and the Internet.

ESL 0072 Guided Independent Grammar *For any level.*
Supervised independent study of selected topics at an appropriate level, using textbooks and/or software.

ESL 0073 Guided Independent TOEFL Preparation *Advanced level.*
Supervised independent study using textbooks, tapes, and software. Includes intensive practice in listening, grammar, and reading as well as coaching in test-taking strategies.

ESL 0080 Reading I *For beginners and near beginners.*
Focuses on building vocabulary and developing reading skills such as finding main ideas, locating pronoun referents, and using context clues. Includes introduction to use of a monolingual dictionary for second language learners. Reading Lab requirement: one hour per week.

ESL 0081 Reading II *For high beginners.*
Focuses on vocabulary expansion and skills building. Students will practice scanning, skimming, predicting, and separating main ideas from supporting ideas. Reading Lab requirement: one hour per week.

ESL 0082 **Grammar I** ***For beginners and near beginners.***
Covers the verb *be*, simple present tense, present progressive, *wh*-questions, possessives, prepositions of time, simple past, past progressive, and parts of speech (nouns, adjectives, prepositions). Independent CD-based exercises on topics covered in 0083 – two hours per week.

ESL 0083 **Grammar II** ***For high beginners.***
Covers imperatives, suggestions, there is/there are, negative questions, future, nouns, articles, and quantifiers, modals, comparatives, superlatives, and basic sentence structure (simple and compound sentences). Independent CD-based exercises on topics covered in 0084 – two hours per week.

ESL 0084 **Writing I** ***For beginners or near beginners.***
Focus on sentence-level writing: clause types, sentence types, sentence combining, conjunctions, and mechanics (punctuation and capitalization). Provides a basic introduction to writing in English that helps students apply what they are learning in other English classes to develop their writing proficiency. Writing Lab requirement: one hour per week.

ESL 0085 **Writing II** ***For high-beginners.***
Continues with sentence-level writing; introduces students to several methods of organizing paragraphs: writing introductions, describing, listing characteristics, stating reasons and examples, and expressing opinion. Appropriate grammar and mechanics is practiced for each method. Writing Lab requirement: onr hour per week.

ESL 0086 **Oral Skills I** ***For beginners or near beginners.***
Offers integrated language acquisition approach in listening, speaking, and pronunciation. Emphasis on language functions and meaningful exchanges in realistic and relevant situations. Intensive practice in sound production and differentiation, syllable stress, word stress, and intonation patterns. Uses language games, textbook activities, recordings, and software. Lab requirement: two hours per week.

ESL 0087 **Oral Skills II** ***For high- beginners.***
An integrated class in listening, speaking, and pronunciation. Increases listening and speaking fluency and confidence by building vocabulary and providing controlled listening and speaking practices in a safe environment. Uses language games, textbook activities, recordings, and software. Work on pronunciation. Lab requirement: two hours per week

ESL 0088 **TOEFL Preparation I** ***Intermediate level.***
Covers strategies and skills necessary for the TOEFL exam. Provides listening, structure, reading, and writing skills practice at an intermediate level. Students learn test-taking strategies, take and analyze practice exams, and work to increase vocabulary in order to prepare for the TOEFL test. Independent CD-based TOEFL exercises on topics covered in 0088: one hour per week.

ESL 0089 **TOEFL Preparation II** ***Advanced level.***
Covers strategies and skills necessary for the TOEFL exam. Provides listening, structure, reading, and writing skills practice at an advanced level. Students learn test-taking strategies, take and analyze practice exams, and work to increase vocabulary in order to prepare for TOEFL test. Independent CD-based TOEFL exercises on topics covered in 0089: one hour per week. Course requirement: 475 on the paper-based TOEFL; 153 on the computer-based TOEFL.

ESL 0090 **Listening III** ***For low-intermediate students.***
This course teaches English necessary for the comprehension of natural, conversational speech. Begins with detailed examination of grammatical and phonological features of spoken English that may challenge listeners; builds to intensive academic listening practice and development of note-taking skills. Linguistic analysis: increased comprehension through familiarity with reductions, linking, contractions, silent letters, unstressed words, syllable stress, affixes, sentence intonation, and contrastive word stress. Listening Lab requirements: one hour per week

ESL 0091 **Listening IV** ***For intermediate students.***
The purpose of this course is to prepare students for academic lecture comprehension and note-taking; students will learn to simultaneously listen to, analyze, organize, and write down new information. Academic focus: Understanding lecture organization, constructing outlines, recognizing cues and main ideas, predicting content and lecture direction, making generalizations, and listening for details. Listening Lab requirements: one hour per week

ESL 0092 **Grammar III** ***For low-intermediate students.***
Review, expansion, and practice of basic verb tenses, imperative forms, phrasal verbs, modals, comparatives and superlatives. Introduces negative questions and tag questions, additions and responses, gerunds and infinitives, phrasal verbs (separable and inseparable), and adjective clauses (with subject relative pronouns and object relative pronouns). Independent CD-based exercises on topics covered in 0094 – two hours per week.

ESL 0093 **Grammar IV** ***For intermediate students.***
Review, expansion, and practice of modals and modal-like verbs, expression of advisability and obligation, speculations and conclusions about the past, and the passive. Introduces the passive with modals and the passive causative, conditionals, direct and indirect speech, indirect instructions, commands, requests, and invitations, indirect questions, and embedded questions. Independent CD-based exercises on topics covered in 0095 – two hours per week.

ESL 0094 **Reading III** ***For low- intermediate students.***
Develops reading skills by studying scanning, previewing and predicting, vocabulary, main ideas, skimming, making inferences, summarizing, paragraph topics and their patterns of organization.

Reading Lab requirement: one hour per week.

ESL 0095 **Reading IV** ***For intermediate students.***
Builds up vocabulary and practices reading strategies. Exercises develop skills in recognizing affixes, using context clues, finding main ideas, scanning for details, drawing inferences, and forming conclusions. Reading Lab requirement: one hour per week.

ESL 0096 **Writing III** ***For low- intermediate students.***
Focus on paragraph-level writing: review of mechanics, sentence structure, and sentence combining, followed by analysis of model paragraphs and practice in locating and formulating main ideas and topic sentences. Study of organizational patterns and outlines for various types of paragraphs. Includes work on unity, transitions, and support. Writing Lab requirement: one hour per week.

ESL 0097 **Writing IV** ***For intermediate students.***
Focuses on paragraph organization using time-order, listing, description, narration, using reasons and examples, comparison and contrast, and facts and opinions. Mechanics and appropriate complex sentence structure for each method will be practiced. Writing Lab requirement: one hour per week.

ESL 0098 **Speaking III** ***For low-intermediate students.***
Increases fluency, comprehensibility, and confidence through both controlled and free speaking practice. Classroom activities, including role-plays, drama, pair dictation, and small group discussion promote fluency and provide a context for the practice of functional language. CD-based assignments provide a comprehensive review of the English sound system as well as useful practice in functional language. Lab requirement: one hour per week.

ESL 0099 **Speaking IV** ***For intermediate students.***
Develops oral presentation skills while examining both formal and informal speaking, including idioms and relaxed speech. Class presentations allow students to share aspects of their own culture such as proverbs, games, folktales, forms of address, standards of conduct, ceremonies, and holidays. Pronunciation is closely monitored to detect irregularities, with individual remedial lab work assigned on sound production and differentiation. Lab requirement: one hour per week.

ESL 1101 **Listening V** ***For high-intermediate students.***
Prepares students for the demands of academic lecture comprehension and note taking. Many organizational plans such as definition, description, cause and effect, process, examples, classification, comparison and contrast, and generalization will be studied. The course will emphasize how to evaluate, organize, and predict information in lectures. Exercises in vocabulary acquisition and language cue recognition are included. Listening Lab requirements: one hour per week.

ESL 1102 **Listening VI** ***For advanced students.***
Academic focus: Introduces listening strategies for academic lectures, such as anticipating and organizing information; understanding humor, connecting words, and pronoun referents; recognizing analogy, quotations, and paraphrasing. Skill-building exercises include listening for main ideas, making inferences, listening for specific information, summarizing, and recognizing vocabulary in context. Listening Lab requirements: one hour per week.

ESL 1103 **Reading V** ***For high-intermediate students.***
Focus on increasing reading speed, accuracy, and comprehension through detailed analysis of word parts, complex sentence structure, and paragraph construction. Vocabulary building activities include study of stems and affixes, practice in guessing meaning from context, exposure to figurative language, and using a monolingual dictionary. Exercises on a wide variety of material provide practice in reading strategies such as skimming, scanning, prediction, restatement, and inference. Reading Lab requirement: one hour per week.

ESL 1104 **Reading VI** ***For advanced students.***
Helps the students be ready for academic reading. Vocabulary building through brainstorming, vocabulary lists, and close exercises that help learners guess the meaning from context and see regularity in the language. Introduces students to the lifestyles, attitudes, customs, and traditions of Americans. Reading Lab requirement: one hour per week.

ESL 1105 **Grammar V** ***For high-intermediate students.***
Review, expansion, and practice of all simple and progressive verb tenses and passive voice. Introduces modals expressing necessity and certainty, countable and uncountable nouns, quantifiers, and adjective clauses. Includes in-depth analysis of sentence structure: parts of speech, phrases, dependent and independent clauses, subordinating and coordinating conjunctions, sentence types, and sentence fragments. Independent CD-based exercises on topics covered in 1105 – two hours per week.

ESL 1106 **Grammar VI** ***For advanced students.***
Review, expansion, and practice of auxiliaries and phrasal verbs, gerunds and infinitives, Introduces adverbs and adverb clauses, noun clauses (subjects and objects), unreal conditionals and other ways to express unreality, and the subjunctive, inverted and implied conditionals. Includes in-depth analysis of sentence structure: sentence types, sentence fragments, parallelism of gerunds and infinitives, sentence and fragments, writing direct and indirect speech, and avoiding run-ons and comma splices. Independent CD-based exercises on topics covered in 1106 – two hours per week.

ESL 1107 **Writing V** ***For high-intermediate students.***
Provides competence in academic writing focusing on paragraph writing, elements of style, and patterns of writing. Practice using support/ evidence, in-text citations, and paraphrase. Includes work on mechanics and detail (such as subject-

verb / pronoun-antecedent agreement) as well as on overall organization, support, and coherence. Practice appropriate grammar (especially run-on, comma splice, fragment, subject-verb agreement errors). Writing Lab requirement: one hour per week

ESL 1108 **Writing VI** ***For advanced students.***
Focus on essay construction. Emphasis is placed on coherence, unity, and writing well-developed and well-organized essays. Explores different rhetorical patterns (chronological order, logical division of ideas, cause-effect, comparison/contrast, etc) as means to the end in fulfilling academic writing assignments. Study of different ways to organize and present ideas for different groups of readers. Emphasis on writing as a process, with frequent group work to generate ideas and practice peer editing. Writing Lab requirement: one hour per week.

ESL 1109 **Speaking V** ***For high-intermediate students.***
Increases vocabulary and fluency through discussions, debates, and presentations. A comprehensive pronunciation program on CD and cassette leads students through a review of the English sound system as well as a detailed study of the finer points of pronunciation, such as rhythm, pitch, and phrasing. Class presentations are more formal and more academic and require research and other preparation. Lab requirement: one hour per week.

ESL 1110 **Speaking VI** ***For advanced students.***
Centered on the oral presentation, this course moves through the entire process of giving an oral presentation from choosing a topic to organizing and delivering a speech. Speech is closely monitored for lingering irregularities, with individual remedial lab work assigned as needed. Lab requirement: one hour per week.

FINANCE COURSES (FIN)

FIN 3331 **Managerial Finance I (3)**
Analysis, planning and control of internal and external finance decisions of a firm with emphasis on corporate structure. *Prerequisite: ACT 2292.*

FIN 3332 **Managerial Finance II (3)**
Second course in a sequence of managerial finance. Continuation of FIN 3331 with focus on topics in financial management not covered in FIN 3331. *Prerequisite: FIN 3331.*

FIN 3333 **Financial Mathematics (3)**
Analysis of time value of money as it applies to loans, securities, banks, annuities, and insurance. *Prerequisite: MTH 2201 or higher.*

FIN 3334 **Financial Statement Analysis (3)**
The process of understanding financial statements by financial analysts and credit analysts, and other uses of financial data. *Prerequisite: FIN 3331.*

FIN 3336 **Real Estate Finance I (3)**
Procedures and operations of real estate mortgage markets. *Prerequisite: FIN 3331.*

FIN 3337 **Personal Financial Planning (3)**
Introduction and comprehensive overview of personal financial planning. Topics include introduction to financial planning, managing assets, credit, insurance, investments, retirement and estate planning.

FIN 4419 **Speculative Markets (3)**
This course examines the theory and usage of forward contracts, futures contracts, index futures, Markov and Wiener processes, Black Scholes analysis, options, indexed options, and hedging using naked and covered positions, and other non-standard derivative securities. *Prerequisite: FIN 4432.*

FIN 4431 **Financial Management (3)**
This is the capstone course in finance. Analysis of financial management of a firm at the intermediate level, with emphasis on the corporation. Includes more advanced analysis of topics covered in the FIN 3331 and 3332 courses, as well as other advanced topics. *Prerequisite: FIN 4432, 4436.*

FIN 4432 **Investments (3)**
Financial analysis of investments, including markets, institutions, and instruments with emphasis on security analysis, portfolio analysis, and financial planning. *Prerequisite: FIN 3332.*

FIN 4434 **Financial Modeling (3)**
This course provides an examination of standard financial models used in corporate finance, financial statement simulation, portfolio problems, options, portfolio insurance, duration, and immunization. The primary focus of study is on the application of strategic models of decision making and marketplace activity within simulated environments which approximate real time. *Prerequisite: FIN 3332.*

FIN 4435 **International Banking and Finance (3)**
A comprehensive introduction and overview of international finance with emphasis upon multinational corporation management, international trade, foreign exchange, and international financial markets, institutions, and instruments. *Prerequisite: FIN 3332.*

FIN 4436 **Securities Analysis (3)**
Introduction and comprehensive overview of securities analysis. Topics include stocks, bonds, mutual funds, taxes, annuities, new issues, IPOs, OTC, exchanges, options, margin trading, short selling, laws and regulations, and fundamental, technical, and modern security and portfolio analysis techniques. *Prerequisite: FIN 4432.*

FIN 4437 Financial Institutions (3)
A comprehensive study of financial markets, institutions, instruments, etc. *Prerequisite: FIN 3332.*

FIN 4438 Bank Management (3)
Introduction and comprehensive overview of bank management. Topics include: organization, regulation, performance, asset management, liabilities management, credit policy, loan evaluation, global banking, bank mergers and acquisitions, etc. *Prerequisite: FIN 3332.*

FIN 4439 Finance Seminar (3)
Review of financial management tools and techniques to solve current problems in financial management. The focus is on problems and the case study method. *Prerequisite: FIN 4432, 4436.*

FIN 4440 Real Estate Finance II (3)
Second course in a sequence on real estate finance. Continuation of FIN 3336. *Prerequisite: FIN 3336.*

FIN 4454 Public Finance (3)
This course examines and analyses public finance from the perspective of the financial management of governmental enterprises. It examines revenues and expenditures at all levels of government, the financial management of government enterprises, and effects of public finance on business finance and personal finance. *Prerequisite: ECO 2252.*

FIN 4491-4492 Guided Independent Research (1-3 credit hours per course per semester.)
Additional information is indexed under Guided Independent Research and Study. Note: This course may not be substituted for any required course.

FIN 4493-4494 Guided Independent Study (1-3 credit hours per course per semester)
Additional information is indexed under Guided Independent Research and Study. Note: This course may not be substituted for any required course. Also see index for Independent Study and Research.

FIN 4495 Selected Topics in Finance (3)
Focus on finance topics of a timely nature and/or special interest. *Prerequisite: Permission of instructor.*

FOREIGN LANGUAGE COURSE (FLN)

FLN 3333 Seminar in World Languages (3)
A survey of the world's major language families with emphasis on the Indo-European languages and the evolution of Latin and Romance languages, coupled with intensive review in the student's major language in preparation for external oral and writing proficiency examinations.

FRENCH COURSES (FRN)

Note: For additional information, see Placement in Academic Courses.

FRN 1101 Introductory French I (3)
Introduction to the French language and culture.

FRN 1102 Introductory French II (3)
Introduction to the French language and culture. *Prerequisite: FRN 1101 or permission of instructor.*

FRN 2201 Intermediate French I (3)
Reinforcement of fundamental skills, study of sophisticated language structures and reading of simple French prose and poetry. *Prerequisite: FRN 1102 or permission of instructor.*

FRN 2202 Intermediate French II (3)
Reinforcement of grammatical skills, reading of simple French prose and poetry, composition and conversation. *Prerequisite: FRN 2201 or permission of instructor.*

FRN 3301 Advanced French I (3)
Advanced-level reading, intensive work on composition, comprehensive treatment of French phonetics. *Prerequisite: FRN 2202 or permission of instructor.*

FRN 3302 Advanced French II (3)
Advanced-level reading, intensive work on composition, aural comprehension, and practical conversation facility. *Prerequisite: FRN 2202 or permission of instructor.*

FRN 3303 French Culture and Civilization (3)
A survey of the geography, history, cultural achievements, institutions and daily life of the French. *Prerequisite: FRN 3301 or 3302 or permission of instructor.*

FRN 3310 French Culture on Location I (3-TBA)
An in-depth presentation of French culture combining lectures, readings, films, audiotapes, discussions and intensive language practice on the Troy campus with on-site visit to a Francophone environment. *Prerequisite: Permission of instructor.*

FRN 3311 French Culture on Location II (3-TBA)
An in-depth presentation of French culture combing lectures, readings, films, audiotapes, discussions and intensive language practice on the Troy campus with on-site visit to a Francophone environment. *Prerequisite: Permission of instructor.*

FRN 4401 French Literature I (3)
French literature from the Middle Ages through the Revolution of 1789. *Prerequisite: FRN 3301 or 3302 or permission of instructor.*

FRN 4402 French Literature II (3)
French literature of the 19th and 20th centuries. *Prerequisite: FRN 3301 or 3302 or permission of instructor.*

FRN 4491-4492 Guided Independent Research (1-3 credit hours per course per semester)
Additional information is indexed under Guided Independent Research and Study.

FRN 4493-4494 Guided Independent Study (1-3 credit hours per course per semester)
Additional information is indexed under Guided Independent Research and Study.

SURVEYING AND GEOMATICS SCIENCES COURSES (GEM)

GEM 1100 Computer-Aided Drafting (2)
This course provides students with the knowledge and skills necessary to create maps and plats. Topics of study include basic drafting principles, drawing set-up and scale, drawing commands, and orthographic projections. *Co-requisite: GEM L110.*

GEM L110 Computer-Aided Drafting Lab (2)
The lab provides the opportunity for students to use computer-aided drafting software to complete project drawings under the direct supervision of a CAD professional. *Co-requisite: GEM 1100*

GEM 2220 Basics of Surveying (3)
This course provides each student an introduction to measurement theory, instrumentation, measurement systems, measurement computations, data accuracy and precision. The structure of the field of geomatics is explored. Major components of the course are survey statistics, traverse computations, coordinate systems and datums, elevations, and mapping. The use of computer-aided drawing software to produce maps and plats is required. *Prerequisites: MTH 1125, PHY 2252/L252.*

GEM L220 Basics of Surveying Lab (1)
This field laboratory provides the opportunity to use instrumentation to make the necessary measurements to produce computed products. Focuses on the use of a field book to record measurements, the analysis of field measurements, and the use of survey instrumentation. *Co-requisite: GEM 2200*

GEM 3309 Land Parcel Administration and Law (3)
The geomatics student is introduced to the basic principles of land tenure and the cadastre. The major component of the course is the study and application of survey statute and related case law. The concepts underlying the hierarchy of evidence, sequential versus simultaneous conveyances, adverse possession, riparian rights, land descriptions, and the U.S. Public Land Survey System are explored. *Prerequisite: GEM 2220 or approval of the Geomatics Program Coordinator. Co-requisite: GEM L309.*

GEM L309 Land Parcel Administration and Law Lab (1)
This laboratory explores the impact of land survey law on the practice of surveying and mapping in the state of Alabama. Focuses on the practice of writing legal descriptions, the structure of the U.S. Public Land Survey System, and courthouse research. *Co-requisite: GEM 3309.*

GEM 3310 Land Survey Practice (3)
The issues of boundary location and retracement are central to this course. Focuses on Alabama survey history, the practice of surveying in Alabama, professional ethics, and the Standards of Practice for Surveying in Alabama. *Prerequisite: GEM 3309.*

GEM L310 Boundary Retracement Seminar (1)
The student gains practical field experience in an off-campus field boundary retracement project provided as a joint effort of Troy University, the Alabama Society of Professional Land Surveyors, and the Federal Bureau of Land Management. *Prerequisite: GEM 3310.*

GEM 3330 Advanced Measurement Analysis (3)
Survey equipment calibration, survey astronomy, topographic mapping, control leveling, instrumentation error, and the propagation of error through survey calculations. This course is the second course of a one-year study of survey fundamentals. *Prerequisite: GEM 2220, MTH 2210.*

GEM L330 Advanced Measurement Analysis Lab (1)
Field laboratory experience gaining astronomic observations for azimuth, using EDMI calibration baselines, conducting topographic mapping projects and control level loops, and testing for instrument errors. The student is introduced to the field use of data collectors. *Co-requisite: GEM 3330.*

GEM 3366 Photogrammetry and Remote Sensing (3)
Introduction to metrical photogrammetry, interpretative photogrammetry, and remote sensing. Focuses on the theory, instrumentation, and practical application of photogrammetry to the problem of mapping the earth's surface. Remote sensing concepts, principles, sensors, and specific satellite platforms are covered in the course. *Prerequisite: MTH 1115. Co-requisite: GEM L366.*

GEM L366 Photogrammetry and Remote Sensing Lab (1)
Use of computer software to view and enhance photographs, to form stereomodels, to create digital elevation models, and produce orthophotos. The opportunity to use a softcopy photogrammetric workstation to generate map compilation products is provided to the student. *Co-requisite: GEM 3366.*

GEM L367 Digital Images in GIS (1 Credit Hour)
This laboratory provides the Geomatics/GIS student the opportunity to gain experience with digital image processing to use the vast inventory of digital images available for GIS projects. *Prerequisites: GEM 3366 and GEM L366.*

GEM 3370 Geodesy and Geodetics (3)
The study of the underlying theory necessary to understand the use of the Global Positioning System (GPS). Focuses on mathematical models of the earth, the earth's gravity field, and the use of near-earth satellites to measure the earth's surface. Important concepts developed in this course include coordinate systems, datums, map projections, coordinate transformations, and GPS network design. *Prerequisites: MTH 1126, GEM 3379/L379, PHY 2253/L253*

GEM L370 Geodesy and Geodetics Lab (1)
Practice performing geodetic computations using the ellipsoid of revolution as a reference surface. A major laboratory component is static GPS network design and the use of dual-frequency survey-grade GPS equipment to extend survey control to the project site. *Co-requisite: GEM 3370.*

GEM L371 Measurements for GIS (1)
The laboratory provides the Geomatics/GIS student valuable hands-on field experience using instrumentation necessary to provide data for GIS Projects. Data will be acquired using the digitizer, mapping grade GPS receivers, and survey grade GPS receivers in the real-time kinematic mode. *Prerequisites: GEM 2220/L220.*

GEM 3379 Introduction to Least Squares Adjustment (3)
The application of the principles of least squares adjustment to compute optimized solutions to problems involving redundant data and the theory of error propagation. *Prerequisites: MTH 1126, 2210*

GEM L379 Introduction to Least Squares Adjustment Lab (1)
The use of the software program Matlab to solve data adjustment problems and to analyze spatial data. Practical application of the theory of least squares adjustment and general error propagation to typical problems in geomatics. *Co-requisite: GEM 3379.*

GEM 3390 Introduction to Geographic Information Systems (3)
This course is the first course in a one-year study of the fundamentals of Geographic Information Systems (GIS). Topics of study are digital mapping, data capture, data conversion, data structures, and spatial data concepts. *Prerequisite: MTH 1112 or equivalent and IS 2241, or consent of instructor.*

GEM L390 Introduction to GIS Lab (1)
The laboratory provides the student the opportunity to learn ArcView GIS software in order to produce GIS products using existing databases.

GEM 3391 Applications of Geographic Information Systems (3)
This course provides a study of common applications of GIS with an emphasis on land information systems and land management. The course also provides further study in database design, digital base map analysis and testing, and spatial analysis. *Prerequisite: GEM 3390 or consent of the instructor.*

GEM L391 Applications of GIS Lab (1)
This laboratory provides the student the opportunity to learn and use ArcInfo GIS to accomplish a full range of GIS applications.

GEM 3395 Cooperative Work Experience I (1)
The geomatics student may register for GEM 4495 after being hired by an eligible employer participating in the Cooperative Work Experience Program. After completion of the semester, the student is expected to submit a written report to the Geomatics Program Coordinator detailing the work experience and present a brief oral report to his/her peers in the following semester in a scheduled geomatics class. *Prerequisites: Completion of GEM 2220, maintenance of a 2.0 grade point average, and approval of the Geomatics Program Coordinator.*

GEM 4405 Route and Construction Surveying (3)
Explores the theoretical foundations of route and construction surveying. Course topics are coordinate geometry (COGO), horizontal and vertical curve models, spirals, alignments, stationing, cross sections, areas, volumes, and route design elements. *Prerequisites: GEM 1100 or the equivalent, and GEM 3330. Co-requisite: GEM L405.*

GEM L405 Route and Construction Surveying Lab (1)
This field laboratory applies the principles of route and construction surveying, the use of civil design software, and the use of data collectors for practical design and field layout. *Co-requisite: GEM 4405.*

GEM 4407 Land Development (3)
Explores the concepts and problems associated with the design and construction of subdivisions and related infrastructure. *Prerequisites: GEM 1100 or the equivalent, and GEM 4409. Co-requisite: GEM L407.*

GEM L407 Land Development Lab (1)
This computer laboratory provides the student the opportunity to design and create those drawings necessary for local government approval of the typical subdivision. *Co-requisite: GEM 4407.*

GEM 4409 Hydrology (3)
Explores several models used to compute runoff estimates based on particular rainfall events. Course topics are the hydrologic cycle, rainfall intensity, runoff models, hydrographs, storm sewer design, culvert design, open channel flows, watershed delineation, water detention and retention structures, and onsite sewage disposal systems. *Prerequisite: GEM 1100 or the equivalent, MTH 1115. Co-requisite: GEM L409. Recommended completion of PHY 2253 or the equivalent.*

GEM L409 Hydrology Lab (1)
Compute peak runoff estimates, and open channel designs. The hydrology components of Microstation and AutoCAD are explored with respect to

solving and presenting peak runoff solutions. A design project involving the use of large-scale topographic maps will be assigned. *Co-requisite: GEM 4409.*

GEM 4410 Introduction to Global Positions (GPS) (3)
Introduction to history and development of GPS and global navigation satellite systems (GNSS); GPS signals and observables; basic principles of GPS operations; GPS error analysis, GPS survey methods and procedures; and GPS data collection, processing; and GPS applications to geomatics. *Prerequisite: GEM 3330/L330, 3370/L370. Corequisite, GEM L410.*

GEM L410 Introduction to Global Positions Lab (1)
This laboratory course provides students practical exercises of GPS theories, instruments, field work, and data processing and analysis. Computational laboratory and field work will be combined throughout the course. *Prerequisite: GEM 3330/ L330, 3370/L370. Corequisite, GEM 4410.*

GEM 4490 Geomatics Capstone (1)
This course ensures preparation for the national Fundamentals of Surveying exam and requires that students develop their own study habits and schedule their time to cover all aspects of the knowledge areas of the exam. *Prerequisite or Corequisite : GEM 4401, L405*

GEM 4496 Cooperative Work Experience II (1)
The geomatics student may register for GEM 4496 for the second semester of cooperative work experience. The student must be in residence at Troy University for a minimum of one semester after completion of GEM 4495 before leaving for cooperative work experience under GEM 4496. *Prerequisites: Completion of GEM 4495 and approval of the Geomatics Program Coordinator.*

GEM 4499 Geomatics/GIS Projects (2)
This course offers the geomatics/GIS student with senior standing the opportunity to apply the fundamental principles and concepts learned in the study of geomatics/GIS to a particular problem or project. The student will state the problem, design an experiment to test a hypothesis concerning the problem statement, take the measurements, array the data, analyze the data, state conclusions, and place the study into a final report. *Prerequisite: IS 2241 and senior standing or consent of the geomatics program coordinator.*

GEOGRAPHY COURSES (GEO)

GEO 2210 World Regional Geography (3)
Physical and cultural features, economy, and populations of the geographic regions of the world.

GEO 2299 Basic GIS (3)
This course is for students who are interested in learning the basics about Geographic Information System (GIS) and use of this powerful technology to create maps, collect data, and perform advanced analysis. This course is designed for a broad audience. *Prerequisite: IS 2241 or permission of instructor.*

GEO 3300 Principles of Physical Geography (3)
Earth geography including climate, soils, natural vegetation, water resources, rocks, minerals, and surface structures.

GEO 3301 Principles of Cultural Geography (3)
Interrelationship of geographical elements in various world situations.

GEO 3307 Geography of Europe (3)
Selected topic studies in the physical and cultural environment, resource distribution, economy, and population characteristics of the European-Slavic land areas. Special attention will be devoted to the study of the geo-political influence of this area or least developed nations and the U. S.

GEO 3309 GIS/Spatial Data Applications in Criminal Justice (3)
An introduction to the use of spatial data applications in a wide range of real world policing endeavors; i.e., monitoring sexual predators, traffic accident reporting and modeling, crime scene analysis. One field trip to the Department of Public Safety in Montgomery, Ala. is required.

GEO 3312 Geography of Latin American (3)
An analysis of the major physical and cultural aspects of Middle and South America. *Prerequisite: Nine hours of social science.*

GEO 3326 Geography of the Russian Realm (3)
An analysis of the physical and cultural aspects of Russia and the other former republics of the Soviet Union. *Prerequisite: Six hours of social science.*

GEO 3331 Geography of the Middle East and North Africa (3)
Physical setting, resource distribution, economy, population characteristics, and geopolitical importance of the region.

GEO 3350 Weather and Climate (3)
A study of the physical properties of weather and climate. *Prerequisite: Twelve hours of science or social science.*

GEO 3370 GIS/Spatial Geodatabase Development (3)
The student will l earn the techniques of proper geodatabase design using ESRI ArcGIS. Insuring proper geodatabase design for various undertakings is the key to utility, longevity of use, and accuracy of decision making using spatial data. *Prerequisite: ECD 3362 or permission of instructor.*

GEO 4402 Political Geography (3)
Analysis of the reciprocal effects of geography and political organization on the behavior of states including boundaries and frontiers, national resources, spatial strategy, and maritime power.

GEO 4403 Conservation (3)
The conservation of natural and human resources with emphasis on population expansion as the major element in changing ecology.

GEO 4404 Economic Geography (3)
Spatial patterns of economic activities including production, distribution, consumption, and the environmental consequences of these activities. *Prerequisite: Twelve hours of social science.*

GEO 4406 Urbanism (3)
Historical, physical, economic, and societal evolution of the urban area. American metropolitan problems and implications for policy and planning. *NOTE: One field trip required at student's expense. This course may be taken for sociology credit.*

GEO 4408 Rural America: Past and Present (3)
A study of rural society, its organization, agencies, institutions, population trends and composition, patterns of settlement, social processes, and change in character. *Prerequisite: Twelve hours of social science.*

GEO 4411 Demography (3)
Population growth, stabilization, decline, and structures in the context of societal change. This course may be taken for sociology credit.

GEO 4415 North American Geography (3)
Survey of agricultural, industrial, and commercial development of Anglo-America. Covers physical and cultural environment, resource distribution, economy, and population characteristics.

GEO 4420 Web Based GIS/Spatial Data Applications (3)
The student will learn the techniques and protocols needed to develop and transmit spatial databases for use by a variety of interests on the World Wide Web. "Remote" spatial data analysis on existing databases will be an important component of the course. *Prerequisite: GEO3370*

GEO 4435 Historical Geography of North America (3)
An analysis of the physical and cultural factors in the development of North America from early European settlement to the present. *Prerequisite: Twelve hours of geography or history.*

GEO 4485 GIS/Spatial Data Modeling (3)
This course concentrates on the various components of precision modeling of the real world or anticipated events of the real world to allow for accurate decision making. *Prerequisite: ECD 3362 or permission of instructor. Corequisite: GEO L485*

GEO L485 GIS/Spatial Data Modeling Laboratory (2)
The purpose of this lab is to allow the students to demonstrate their ability to collect, formulate, analyze, and draw conclusions based upon a real world modeling exercise. Prerequisite: ECD 3362 or permission of instructor. Corequisite: GEO 4485

GEO 4491-4492 Guided Independent Research (1 to 3 credit hours per course per semester)
Undergraduate research with attention to critical evaluation of research techniques, methods and procedures. *Prerequisites: Junior or senior standing with a minimum overall GPA of 3.0, permission of guiding professor, approval of department chair or dean. A written request is to be submitted to the department chair at least two weeks in advance of the term in which the study is to be undertaken. May not be used to repeat a course for which a grade of D of below has been earned. Application forms are available in the office of University Records. Guided independent research may be taken only in the applicant's major or minor field. Also see index for "Independent Study and Research."*

GEO 4493-4494 Guided Independent Study (1 to 3 credit hours per course per semester)
Supervised study through field and laboratory projects, guided readings, creative endeavors or achievement of specific skills. *Prerequisites: Junior or senior standing, with a minimum overall GPA of 3.0, permission of guiding professor, approval of department chair or dean. A written request is to be submitted to the department chair at least two weeks in advance of the term in which the study is to be undertaken. May not be used to repeat a course for which a grade of D or below has been earned. Application forms are available in the office of University Records. Guided independent research may be taken only in the applicant's major or minor field. Also see index for "Independent Study and Research."*

GEO 4498 Honors Independent Study (1 to 3 credit hours)
Advanced research and study for outstanding students in their major field. Culminates in report to a department committee which includes invited faculty members in related fields.

GERMAN COURSES (GER)

Note: For additional information, see Placement in Academic Courses.

GER 1121 Introductory German I (3)
Introduction to the German language and culture.

GER 1122 Introductory German II (3)
Introduction to the German language and culture. Prerequisite: GER 1121 or permission of instructor.

GER 2221 Intermediate German I (3)
Emphasis on basic language skills and knowledge of German culture. *Prerequisite: GER 1122 or permission of instructor.*

GER 2222 Intermediate German II (3)
Emphasis on basic language skills and knowledge of German culture. *Prerequisite: GER 2221 or permission of instructor.*

GER 4493-4494 Guided Independent Study (1-3 credit hours per course per semester)
Additional information is indexed under Guided Independent Research and Study.

GREEK COURSES (GRK)

Note: For additional information, see Placement in Academic Courses.

GRK 1111 Introductory Greek I (3)
Introduction to the ancient Greek language with emphasis on pronunciation, basic vocabulary, fundamentals of grammar, and graded readings.

GRK 1112 Introductory Greek II (3)
Continuation of GRK 1111. *Prerequisite: GRK 1111 or permission of instructor.*

Note: The study of Greek may be continued under the headings of CLA 4400 Special Topics in Classics and CLA 4493-4494 Guided Independent Study. Also see index for "Independent Study and Research."

HISTORY COURSES (HIS)

HIS 1101 Western Civilization I (3)
Survey of developments in Western history from the pre-historic era to early modern times, including classical antiquity, Middle Ages, and Renaissance and Reformation.

HIS 1102 Western Civilization II (3)
Survey of developments in Western history from modern times to the contemporary era, including the Scientific Revolution, Enlightenment, French Revolution and Napoleon, nationalism, imperialism, two world wars, and the postwar era.

HIS 1103 Honors Western Civilization I (3)
Chronological coverage same as HIS 1101. Enrollment restricted to superior students. *Prerequisite: Permission of department chair.*

HIS 1104 Honors Western Civilization II (3)
Chronological coverage same as HIS 1102. Enrollment restricted to superior students. *Prerequisite: Permission of department chair.*

HIS 1111 U.S. to 1877 (3)
Survey of American history from the colonial period through Reconstruction, including the Revolution, Constitution, Early National Era, sectional problems, and the Civil War.

HIS 1112 U.S. since 1877 (3)
Survey of American history from post-Reconstruction to the contemporary era, including industrialization, emergence as a world power, World War I, Great Depression, World War II, Cold War, the expanding role of government, and global issues in the post-Communist era.

HIS 1113 Honors U.S. to 1877 (3)
Chronological coverage same as HIS 1111. Enrollment restricted to superior students. *Prerequisite: Permission of department chair.*

HIS 1114 Honors U.S. since 1877 (3)
Chronological coverage same as HIS 1112. Enrollment restricted to superior students. *Prerequisite: Permission of department chair.*

HIS 1122 World History to 1500 (3)
This course surveys the origins, development, and character of the major centers of civilizations and their relationships to one another from the earliest civilizations to 1500.

HIS 1123 World History from 1500 (3)
This course surveys the growth, development, and character of the major centers of civilizations from 1500 to the present. The course focuses on the growing interconnections among societies around the globe in politics, economics, culture, and technology and examines the wide processes leading to the emergence of the present world.

HIS 3302 History of Religion in the United States (3)
A study of the development of religion in the United States, including denominations, beliefs, church life, and the relationship of religious beliefs to other beliefs and institutions. *Prerequisite: HIS 1111 and 1112 or permission of instructor.*

HIS 3304 Military History of the United States (3)
A study of war in United States history from the Colonial period to the present, with emphasis on the role of warfare in United States history and the relationship of the military to the civilian. *Prerequisite: HIS 1111 and 1112 or permission of instructor.*

HIS 3306 African-American History (3)
An introduction to the history of African Americans from the 17th century to the present, including slavery, Civil War and emancipation, legalized discrimination, and the struggles for equality in present day American society. *Prerequisite: HIS 1111 and 1112 or permission of instructor.*

HIS 3309 England to 1688 (3)
A survey of English history from the Anglo-Saxons to the Glorious Revolution, emphasizing the interaction of geographical, political, economic, and cultural forces which shaped England as a monarchy. *Prerequisites: HIS 1101 and 1102 or permission of instructor.*

HIS 3310 England since 1688 (3)
The final evolution of the English political system from the reign of William and Mary to the contemporary era, including social and economic transformations, the British Empire, the two world wars, the welfare state, and current issues. *Prerequisites: HIS 1101 and 1102 or permission of instructor.*

HIS 3315 The Vietnam War (3)
A study of the period 1946 to 1975 in Indochina with emphasis on the American involvement during and after the French colonial period, escalating involvement of the Kennedy and Johnson administrations, and Vietnamization and withdrawal under President Nixon. *Prerequisites: HIS 1111 and 1112 or permission of instructor. *May be used for political science credit.*

HIS 3316 History of Alabama (3)
A study of the demographic, political, social, economic, and religious aspects of Alabama's history, emphasizing the role of the state within the nation. *Prerequisites: HIS 1111 and 1112 or permission of instructor.*

HIS 3318 History of American Women (3)
An introduction to the history of women in America from the 17th century to the present, exploring the major economic, religious, social, and political ideas and developments which have shaped their status and role in American history. *Prerequisites: HIS 1111 and 1112 or permission of instructor.*

HIS 3330 Historical Archeology (3)
An examination of the historical research methods and archaeological techniques used to investigate and interpret archaeological sites dating from the prehistoric period.

HIS 3341 Medieval Europe (3)
Western Europe from the fall of Rome to the Renaissance, including religious and intellectual traditions and the revival of governmental institutions. *Prerequisites: HIS 1101 and 1102 or permission of instructor.*

HIS 3342 Renaissance and Reformation (3)
Historical review of the transitional centuries bridging the medieval and the modern eras, including the rebirth of art and literature, the Protestant and Catholic reform movements, and the role of kings and states. *Prerequisites: HIS 1101 and 1102 or permission of instructor.*

HIS 3343 Age of Absolutism (3)
Survey of political and religious controversies that shaped affairs in Europe during the 16th and 17th centuries, emphasizing the flowering of monarchy and aristocracy. *Prerequisites: HIS 1101 and 1102 or permission of instructor.*

HIS 3344 Age of Reason (3)
Survey of European history in the 18th century, emphasizing the cataclysmic developments in scientific, political, humanitarian, and economic thought that prepared the way for the rise of democracy in both the old and the new world. *Prerequisites: HIS 1101 and 1102 or permission of instructor.*

HIS 3352 History of Africa (3)
A survey of 19th and 20th century political, social, and cultural history of the region, including the partition of Africa by European powers and decolonization. *Prerequisites: HIS 1101 and 1102 or permission of instructor.*

HIS 3356 History of the Middle East (3)
Background information on Islam, the Ottoman Empire, and Western influence sets the scene for a detailed study of political, economic, and social developments since World War II. *Prerequisites: HIS 1101 and 1102 or permission of instructor.*

HIS 3360 Introduction to Archives: Theory and Issues (3)
This course will introduce students to the history and social value of records and archives, to the theory underlying professional archival practice, and to the application of archival theories in the digital world.

HIS 3362 Archival Methods and Practices (3)
This course will introduce students to the practical tasks performed by archivists in securing and preserving records, processing, arranging, describing, and providing access to them.

HIS 3375 Research and Methodology (3)
A course designed to acquaint students with research methods and computer skills as related to the history profession. The principal requirement is the successful completion of a formal research paper in which students will demonstrate proficiency in research, writing, and basic computer skills. *NOTE: It is strongly recommended that history majors complete this course during the first term of their junior year. Prerequisite: Nine semester hours of history, including one of the freshman/sophomore-level series. (Students must receive a grade of C or better for credit toward completion of degree requirements.)*

HIS 4401 French Revolution and Napoleon (3)
A study of the absolutist-aristocratic France challenged by democratic-egalitarian ideals and revolution, including the role of Napoleon as conqueror of Europe and as propagator and destroyer of the French Revolution. *Prerequisites: HIS 1101 and 1102 or permission of instructor.*

HIS 4402 Europe from 1815-1900 (3)
A study of Europe from the Congress of Vienna to 1900, including political, social, and economic developments in various countries, the rise of nationalism and unification movements, and imperialism. *Prerequisites: HIS 1101 and 1102 or permission of instructor.*

HIS 4403 Contemporary Europe (3)
Traces European history in the 20th century, including domestic developments, World War I,

Great Depression, rise of totalitarianism, World War II, European integration, the Cold War, and the post-Cold War era. *Prerequisites: HIS 1101 and 1102 or permission of instructor.*

HIS 4405 Old South (3)
An examination of the cultural, political, religious, and economic trends that shaped the colonial and antebellum South and the Civil War which ended that era. *Prerequisites: HIS 1111 and 1112 or permission of instructor.*

HIS 4406 New South (3)
An examination of the political, social, racial and religious trends and policies that defined the New South. Topics include reconstruction, redemption, agrarian unrest, Jim Crow, industrialization, Progressive Movement, World War I, the Great Depression, World War II, and the Civil Rights Movement. *Prerequisites: HIS 1111 and 1112 or permission of instructor.*

HIS 4411 Colonial America (3)
Study of the colonial period from European discovery to the end of the French and Indian War, with emphasis on the political, economic, and social developments that set the stage for the American Revolution. *Prerequisites: HIS 1111 and 1112 or permission of instructor.*

HIS 4412 The American Revolution and the New Nation, 1763-1815 (3)
Ideas and institutions which led to American independence, the creation of the American union, and the development of a distinctive American culture in the Early National Era. *Prerequisites: HIS 1111 and 1112 or permission of instructor.*

HIS 4413 Antebellum, Civil War and Reconstruction, 1815-1877 (3)
Examines nationalism, Jacksonian democracy, territorial expansion, slavery and sectional strife, and the resulting Civil War and Reconstruction. *Prerequisites: HIS 1111 and 1112 or permission of instructor.*

HIS 4414 Emergence of Modern America, 1877-1919 (3)
Includes agricultural decline and crisis, industrialization and urbanization, Progressive reform era, World War I, and America as a world power. *Prerequisites: HIS 1111 and 1112 or permission of instructor.*

HIS 4415 Contemporary America (3)
Includes America in the Great Depression, World War II and the Cold War, Civil Rights Movement, Johnson's Great Society, and America as a superpower. *Prerequisites: HIS 1111 and 1112 or permission of instructor.*

HIS 4420 History of American Minorities (3)
Study of selected ethnic, racial, cultural, social, and religious minorities, their treatment within and their contributions to American society. *Prerequisites: HIS 1111 and 1112 or permission of instructor.*

HIS 4423 American Foreign Policy to 1920 (3)
A study of the factors, forces, and functions in the making of American foreign policy from the 1760s to 1920. *Prerequisites: HIS 1111 and 1112 or permission of instructor. May be used for political science credit.*

HIS 4430 Civil Rights Movement (3)
Study of the origins of the Civil Rights Movement in the late nineteenth and twentieth centuries, beginnings of change in the 1930s and the World War II era, and the movement itself as defined by legal, political, and social conflict and change from the latter 1940s to the present. *Prerequisites: HIS 4414 and 4415 or permission of instructor.*

HIS 4432 Russia to 1861 (3)
A study of the history of the Eastern Slavic people from the prehistoric period through the Kievan, Appanage, Muscovite, and Imperial periods, from Peter the Great to the emancipation of the serfs in 1861. *Prerequisites: HIS 1101 and 1102 or permission of instructor.*

HIS 4433 Russia Since 1861 (3)
The development of the revolutionary movements and tsarist reform attempts, World War I, revolutions of 1917 and Bolshevik victory, establishment of the Stalinist state, World War II, Cold War, Soviet domestic problems, and the disintegration of the USSR. *Prerequisites: HIS 1101 and 1102 or permission of instructor.*

HIS 4434 Major Personalities in the Development of Civil Rights in America (3)
Study of important civil rights personages and their writings from Frederick Douglass and other pre-Civil War activists and thinkers to the present. *Prerequisite: HIS 4430.*

HIS 4435 Historical Geography of North America (3)
An analysis of the physical and cultural factors in the development of North America from early European settlement to the present. May be used as geography credit. *Prerequisites: HIS 1111 and 1112 or permission of instructor.*

HIS 4436 Civil Rights in Alabama (3)
Study of the history of civil rights in Alabama beginning with the Reconstruction period and progressing through central events and developments up to the present. Course emphasis also will include legal developments and important personalities. *Prerequisite: HIS 4430.*

HIS 4441 American Constitutional Development (3)
American constitutional system with emphasis upon its origin and evolution via amendments and Supreme Court decisions. *Prerequisites: HIS 1111 and 1112 or permission of instructor. May be used for political science credit.*

HIS 4445 History of Modern Germany (3)
Survey of Germanic peoples from the Revolutions of 1848 to the present, emphasizing unification, two world wars, postwar division, and reunification. *Prerequisites: HIS 1101 and 1102 or permission of instructor.*

HIS 4448 The Westward Movement (3)
Study of the history of American expansionism and westward movement and its impact on political, economic, and social institutions. *Prerequisites: HIS 1111 and 1112 or permission of instructor.*

HIS 4450 Environmental History of the U.S. (3)
An introduction to environmental history of the United States from the 18th century to the late 20th century, emphasizing the post-World War II period. The course will focus on the historical development of the science of ecology, the origins of environmental problems and solutions attempted by government and experts, as well as responses by grassroots activists over time. *Prerequisites: HIS 1111 and 1112 or permission of instructor.*

HIS 4451 The Far East (3)
Study of the development and interaction of Chinese, Japanese, and Korean civilizations, the impact of Western cultures, twentieth century conflicts, resolutions and accommodations. *Prerequisites: HIS 1101 and 1102 or permission of instructor.*

HIS 4454 Western Thought since the 17th Century (3)
Principal ideas and political thinking from the Age of the Enlightenment to the present. *Prerequisites: HIS 1101 and 1102 or permission of instructor.*

HIS 4470 Oral History (3)
An introduction to the methods and practice of oral history.

HIS 4471 Local History (3)
An exploration of history, historiographic issues, and methodology of local history in the United States. Provides opportunities to become familiar with sources used in studying local history and to gain practical experience in conducting local history research.

HIS 4472 Records Management (3)
An introduction to the scope of managing records in an organization and to the practical tasks associated with establishing a records management program in a business, office of government, or nonprofit organization.

HIS 4473 Archives Practicum (3)
Provides students with an opportunity to apply their knowledge of archival and records management theory and practice. Students will be assigned to work on projects at an archival repository chosen in cooperation with instructor. May be repeated once as an elective. *Note: Credit in Archival Minor only.*

HIS 4474 Internship in History Education (9)
The Professional Internship Program is the culminating clinical field-based experience for students seeking certification in a teaching field. The Professional Internship Program provides the student with the opportunity to conduct classes and assume the role of a teacher while receiving supervision from a classroom teacher and a university supervisor for a period of one full semester. The student will demonstrate skills of the informed, reflective decision maker throughout the internship experience. *Prerequisite: Admission to TEP. Corequisite: SED 4454.*

HIS 4481 Methods and Materials for the Secondary Teacher (3)
A survey of teaching methods and materials appropriate for teaching in the content areas for grades 6-12. Topics addressed will include teacher evaluation in the public schools, collaboration with special education teachers, and lesson planning formats. In addition, teaching methods, selections organization and use of history/social science materials for grades 6-12 will be covered in detail. A professional laboratory experience is included in this course. *Prerequisite: Admission to TEP.*

HIS 4482 Hispanic American Beginnings (3)
Colonial systems of Spain and Portugal in the Americas from the 16th to 19th centuries, with emphasis on revolt and the establishment of the Latin American republics and religious and economic institutions. *Prerequisites: HIS 1111 and 1112 or permission of instructor.*

HIS 4483 Latin American States (3)
Cultural, social, political, and economic development in 19th and 20th centuries and international and U.S. relations. *Prerequisites: HIS 1111 and 1112 or permission of instructor.*

HIS 4490 Senior Seminar in History (3)
The capstone course for history majors which synthesizes students' course work through research, historiography, writing, speaking, and reading comprehension. *Prerequisites: senior standing at all institutions and HIS 3375*

HIS 4491-4492 Guided Independent Research (1-3)
Additional information is indexed under Guided Independent Research and Study.

HIS 4493-4494 Guided Independent Study (1-3)
Additional information is indexed under Guided Independent Research and Study.

HIS 4495 Selected Topics in History (3)
Historical examination of a designed topic of special and/or current interest and importance, which is generally not covered in regularly offered courses by the department. *Prerequisites: Applicable survey courses and permission of instructor.*

HIS 4496 Secondary Education Internship — History (9)
Additional information is indexed under The Professional Internship Program.

HIS 4498 Honors–Independent Study (1 to 3 hours–TBA)
Advanced research and study for outstanding students in their major field. Culminates in report to a departmental committee that includes invited faculty members in related fields. *Prerequisite: Senior level and 3.5 overall grade point average. Permission of guiding professor and approval of department chair and the dean of arts and sciences. A written request must be submitted to the department chair at least six weeks in advance of the semester the research is to be undertaken.*

HIS 4499 Internship in History (1-3)
Supervised work in an agency that can provide practical experience in the field of study. *Prerequisites: Senior standing, at least 2.5 GPA, 12 hours in upper-division courses in the field, and permission of supervising instructor, department chair and/or dean.*

UNIVERSITY HONORS PROGRAM COURSES (HON)

Please see the index for additional information regarding the University Honors Program.

HON 1101 Freshman Honors Colloquium (3)
The first in a series of interdisciplinary seminars for University Honors Program candidates, combining class work with focus on the humanities, social sciences, natural sciences, attendance at campus and community events, and University Honors Program student activities. *Prerequisite: admission as a candidate for University Honors Program in fall semester of the freshman or sophomore year.*

HON 2200 University Honors Special Topics: Interdisciplinary I (3)
A one-semester course for students who have been accepted into the University Honors Program via the PEAK Program and completion of the requirements for candidacy. Interdisciplinary topics are determined in advance by the Honors Council and the honors director. *Prerequisites: HON 1101 or permission of the honors director.*

HON 3300 University Honors Special Topics: Interdisciplinary II (3)
A one-semester course for students who have been accepted into the University Honors Program. Interdisciplinary topics are determined in advance by the Honors Council and honors director. *Prerequisite: HON 2200 or permission of the honors director.*

HON 4400 University Honors Capstone Seminar in Leadership (3)
The final course in the interdisciplinary sequence of University Honors courses is focused upon the subject of leadership, with specific leadership and service topics determined in advance by the Chancellor, the Director of the Honors Program, and the Director of the Institute for Leadership Studies.

HON 4498 Department Honors Thesis or Project (3)
Independent study with honors-level credit within the student's major department. See departmental offerings in English and histo

HUMAN SERVICES COURSES (HS)

HS 2230 Survey of Human Services (3)
A survey of the major human service delivery systems to include historical development, populations served, professional roles, and interrelationships between targeted social problems and services delivered. Introduction to the ecological/systems perspective as a tool for understanding these relationships. Includes observations and field trips.

HS 2231 Peer Education-Drug Abuse Prevention (2)
Introduction to peer education as a preventive procedure in working with campus drug and alcohol abuse. Techniques of peer teaching and peer counseling.

HS 2232 Peer Education Practicum (1)
Supervised experience in the Campus Peer Education - Drug Abuse Prevention Program. *Prerequisite: HS 2231 (May be repeated for a total of three hours credit).*

HS 3310 Human Behavior In the Social Environment I (3)
The biopsychosocial aspects of human growth and development throughout the life cycle. Emphasis is placed on understanding the individual in interaction with major social systems. Knowledge, skill, and value bases necessary for biopsychosocial assessment are built.

HS 3370 Professional Communication Skills (3)
Principles and techniques of interviewing for human services professionals. Major emphasis is the building of empathic skills.

HS 3380 Human Services Study Abroad (3)
Students will study abroad and engage in service learning opportunities in another culture. Students will develop an understanding of the economy, culture, customs and human services practices of the country while observing and engaging in direct human service practice. *Prerequisites: successful completion of Troy Study Abroad Program requirements and fees.*

HS 4400-4410-4420 Human Service Field Experience I (3), II (3) and III (3)
Provides experiences in a variety of social and rehabilitation settings with an emphasis on the multiple natures of human problems and the impact these problems have on the disabled and disadvantaged. Includes a weekly seminar plus a minimum of 40 clock hours per semester hour spent in a particular agency setting. Clinical hours and responsibilities will be determined by internship supervisor. *Prerequisites: Senior level, HS 2230 and HS 3370 or permission of instructor. The field site must be approved by the practicum director by mid-term of the semester prior to the field experience.*

HS 4491-4492 Guided Independent Research (1 to 3 credit hours per course per semester)

Additional information is indexed under Guided Independent Research and Study.

HS 4493-4494 Guided Independent Study (1 to 3 credit hours per course per semester)

Additional information is indexed under Guided Independent Research and Study.

HS 4498 Honors-Independent Study (1 to 3 credit hours per course per semester)

Advanced research and study for outstanding students in their major field. Culminates in a report to a departmental committee which includes invited faculty members in related fields. *Prerequisite: Senior level, 3.5 overall average, permission of guiding professor, and approval of department chair and dean. NOTE: A written request must be submitted to the department chair at least six weeks in advance of the term the research is to be undertaken.*

INTERDISCIPLINARY STUDIES COURSES (IDS)

IDS 2200 Crossroads: Sophomore Interdisciplinary Seminar in Creative Thinking (3)

This seminar examines specific academic themes from a variety of interdisciplinary perspectives that reach across the human, natural, and social sciences. By capitalizing on the distinctive methodologies offered by faculty members from different academic disciplines, the seminar involves students and faculty in creating original approaches to course themes. *Prerequisites: Completion of 29 hours of coursework by the start of the seminar; written statement of interest to Seminar faculty; 3.0 grade point average, ENG 1101 with a grade of B or better.*

INTERDISCIPLINARY EDUCATION COURSES (IED)

IED 4454 Internship Seminar for Interdisciplinary Education (3)

This course provides seniors an opportunity during internship to examine broad educational issues and concerns, topics on the state and local levels, and those of personal interest. The scope of the course ranges from juvenile law, classroom management professionalism, professional development for teachers and other course topics. *Prerequisite: Admission to TEP. Co-requisite: IED Internship.*

IED 4472 Internship in Grades P-12 (9)

The Professional Internship Program is the culminating clinical field-based experience for students seeking certification in a teaching field. The Professional Internship Program provides the student with the opportunity to conduct classes and assume the role of a teacher while receiving supervision from a classroom teacher and a university supervisor for a period of one full semester. The student will demonstrate skills of the informed, reflective decision maker throughout the internship experience. *Prerequisite: Admission to TEP. Co-requisite: IED 4454.*

IED 4491-4492 Guided Independent Research (1-3)

Undergraduate research with attention to critical evaluation of research techniques, methods and procedures. *Prerequisites: junior or senior standing with a minimum overall GPA of 3.0, permission of guiding professor, approval of department chairperson or dean. A written request is to be submitted to the department chairperson at least two weeks in advance of the term in which study is to be undertaken. May not be used to repeat a course for which a grade of D or below has been earned. Application forms are available in the Office of University Records. Guided independent research may be taken only in the applicant's major or minor field. Also see index for "Independent Study and Research."*

IED 4493-4494 Guided Independent Study (1-3)

Supervised study through field or laboratory projects, guided readings, creative endeavors or achievement of specific skills. *Prerequisites: junior or senior status, permission of guiding professor, approval of department chairperson and the dean. A written request is to be submitted to the department chairperson at least two weeks in advance of the term in which study is to be undertaken. May not be used to repeat a course for which a grade of D or below has been earned. Also see index for "Independent Study and Research."*

INFORMATION SYSTEMS COURSES (IS)

IS 2241 Computer Concepts and Applications (3)

This course provides an interdisciplinary introduction to microcomputer literacy, word processing, spreadsheets, database, business graphics and the internet.

IS 2244 Computer Programming I (3)

An introduction to a programming language is provided. The course presents programming fundamentals, including program structure, assignment, data types, input/output, flow of control, and functions. It includes top-down design, structured programming using the basic control structures, sequence, decision, and repetition, modularization, and encapsulation. *Prerequisite: Grade of C or higher in IS 2241 and MTH 1112, (MTH 2201 recommended).*

IS 2260 Computer Programming II (3)

Advanced programming, including arrays, pointers, strings, the pre-processor, structures, list processing, and advanced I/O, is examined. Emphasis is placed on developing and testing moderately complex programs. *Prerequisite: IS 2244.*

IS 3300 Introduction to Information Systems (3)

Introduction to information systems concepts, with an emphasis on describing information systems requirements, managing information resources, and applying information technology to the solution of business and management challenges. *Prerequisite: IS 2241.*

IS 3320 Data Communication and Computer Networking (3)
This course covers the theory, hardware and software of computer networks. Emphasis is placed on data communication principles, local area networks, and wide area networks. *Co-requisite: IS 3300.*

IS 3330 Web Authoring (3)
A survey of the programming languages and tools used to develop Web-based applications. *Prerequisite: IS 2244 or permission of the instructor.*

IS 3339 Object-Oriented Programming I (3)
A conceptual framework is presented for object-oriented programming. Topics discussed include classes, data hiding, member functions, object creation, overloading, inheritance, parametric polymorphism, and reusable code. *Prerequisite: IS 2244.*

IS 3346 Database Management Systems I (3)
Introduction to database management and design techniques. Emphasis is on the relational model of database management including data definition and manipulation, database design and normalization concepts, database administration, and database application generation. *Prerequisites: IS 2244 and IS 3300.*

IS 3349 Object-Oriented Programming II (3)
Intermediate and advanced object-oriented programming concepts. Topics include error handling and debugging, file handling and database access, dynamic data exchange, creating linked and embedded objects, business graphics and reports, and advanced GUI design concepts. *Prerequisite: IS 3339.*

IS 3380 Network Operating Systems (3)
This course covers the deployment and administration of current network operating systems. Emphasis is placed on the practical application of installing and administration of PC-based network operating systems in a LAN environment. *Prerequisite: IS 3320.*

IS 4420 Web Server Administration (3)
This course covers a comprehensive overview of the tools, techniques and tasks needed to succeed as a Web server administrator. The course provides an introduction to the basics of the role including installation, configuration and administration of Web servers. *Prerequisite: IS 3380.*

IS 4430 Web Site Design (3)
Includes coverage of web site creation, design, programming, planning, and maintenance. *Prerequisite: IS 3346 and IS 3330.*

IS 4440 Database Management Systems II (3)
Modeling data organization; representation of data relationships; data definition languages; data access via languages in context models; facilities provided by DBMSs; implementation techniques; operational requirements; a survey of state of the art DBMSs. *Prerequisite: IS 3346 and IS 3330.*

IS 4443 Internet Development (3)
Advanced application development using databases and an Internet application development environment. *Prerequisite: IS 3346 and IS 3330.*

IS 4447 System Engineering and Project Management (3)
This course covers issues and procedures of design, implementation, testing, documentation and management of computer information systems, as well as models and principles to manage information system projects. *Prerequisite: IS 3346.*

IS 4450 Network Design and Management (3)
This course covers the design and administration of essential network directory services. Emphasis is placed on the practical application of designing, installing, securing, and administering directory services using PC-based network operating systems in a LAN environment. *Prerequisite: IS 3380.*

IS 4451 Network Infrastructure and Security (3)
This course covers the administration of essential network infrastructure services. Emphasis is placed on the installing and administering of the following network services on PC-based network operating systems in a LAN environment: DNS, DHCP, remote access, WINS, IP routing, and security. *Prerequisite: IS 3380.*

IS 4460 E-Commerce Design (3)
This course introduces the basic concepts and language of e-commerce. Coverage includes the planning and development of an e-commerce site, including such issues as security, customer service, payment, and marketing. The course is designed to teach students to explore and evaluate e-commerce technologies, sites, and issues. *Prerequisite: IS 4447.*

IS 4491-4492 Guided Independent Research (1-3 credit hours per course per semester.)
Additional information is indexed under Guided Independent Research and Study. Note: This course may not be substituted for any required course.

IS 4493-4494 Guided Independent Study (1-3 credit hours per course per semester)
Additional information is indexed under Guided Independent Research and Study. Note: This course may not be substituted for any required course.

JOURNALISM COURSES (JRN)

NOTE: Reasonable proficiency in keyboarding (25 wpm) is a prerequisite for all journalism courses except JRN 1101 and JRN 1103.

JRN 1100 Technologies in Journalism (3-4)
An introduction to the technological advances in journalism and the promotion of an understanding of the impact of these advancements. Must make a C or better to take JRN 2201.

JRN 1101 Introduction to Mass Communications (3-3)
The newspaper and other communications media in modern society.

JRN 1102 Writing for Mass Media (3-4)
A basic course in preparing written materials for the mass media. *Prerequisites: ENG 1101 and 1102, JRN 1100, with grade of C or better in each course. May be taken concurrently with JRN 1100. Must make at least C or better in JRN 1102 before taking JRN 2201.*

JRN 1103 Introduction to Radio and Television (3-3)
An introduction to the electronic forms of mass communication with discussions on the theoretical and business aspects of radio and television, cable and corporate video communications, and an introduction to programming and regulations.

JRN 2201 Reporting (3-4)
Gathering, evaluating and reporting the news. *Prerequisite: Completion of JRN 1102 with grade of C or better and sophomore standing. Must make at least C or better in JRN 2201 before taking another journalism course. Requires one hour per week of work on student media.*

JRN 2203 Broadcast News Writing (3-4)
Gathering, evaluating, writing and performing broadcast copy. Applies news gathering techniques to the broadcast writing style, on-the-scene coverage, interviewing and announcing. Must make a C or better. *Prerequisite: JRN 2201. Requires one hour per week of work at Trojan Vision-TV.*

JRN 2210 Global Journalism and International Media Systems (3-3)
An examination of international and domestic mass media systems, the flow of information and technology, and issues of media ownership, access, regulations, programming and cultural differences in international communications.

JRN 2211 Editing (3-4)
Editing copy for publication, headline writing and image sizing. Must make a C or better. *Co-requisite or Prerequisite: JRN 1102.*

JRN 2220 Introduction to Advertising (3-3)
An introduction to the principles and background of advertising, advertising campaigns and the different types of advertising. Special emphasis is given to social, legal, planning and creative aspects.

JRN 2230 Introduction to Public Relations (3-3)
This introductory course examines the communication and persuasion concepts underpinning public relations, in addition to public relations history, role, ethical and professional standards, strategic planning and tactical planning.

JRN 3300 Print News Photography (3-4)
Discussion of and practical experience in photography for newspapers and magazines in the areas of general news, features and sports photography.

JRN 3302 Feature and Magazine Article Writing (3-4)
Researching, writing and marketing magazine feature articles, with emphasis on the human interest story, the personality sketch and the "color" story. *Prerequisite: JRN 2201.*

JRN 3312 Advanced Editing (3-4)
Page layout and design, including the special pages, with an introduction to typography and graphics. *Prerequisite: JRN 2211.*

JRN 3315 Advanced Reporting (3-4)
News reporting and writing on sports, business, consumer affairs, the environment, and public affairs, particularly local and state government, the courts and education. Emphasis is placed on use of background research and multiple sources and writing on deadline. Must make a C or better to receive credit toward degree. *Prerequisite: JRN 2201.*

JRN 3320 Information Gathering (3-4)
Supervised journalism-related experiences focusing on gathering and analyzing information through discussion and practice of the techniques of interviewing, document and online research, focus groups and opinion surveys.

JRN 3321 Public Relations Cases and Strategies (3-3)
A case study and project-based approach to public relations research, strategy setting and tactical implementation. *Prerequisites or co-requisites: JRN 2201, 2230 (Introduction to Public Relations).*

JRN 3322 Advertising Copywriting (3-4)
The principles of advertising psychology studied in relation to the techniques for writing effective copy; approximately half of the course is devoted to practice in writing effective advertisements. *Prerequisites: JRN 2201 and JRN 2220 or special permission from the director of the School of Journalism.*

JRN 3326 Advising Student Publications (3-3)
Students successfully completing this class will have the ability to teach journalism, including how to produce magazine and newspaper layout; develop copy and/or storyboard for radio and television production; apply techniques of advertising, reporting and editing; and use current and emerging technology in the production of print and non-print journalism. *NOTE: For current or prospective advisers of high school or college newspapers and yearbooks.*

JRN 3327 Sports Broadcasting (3-3)
Advanced methods, techniques and performance styles for broadcast sports news and information. *Prerequisite: JRN 2201.*

JRN 3330 Journalism Practicum (variable credit 1-3 hours)
Supervised journalism-related experiences focusing on gathering information, writing, editing, photography, design, online journalism, electronic journal-

ism, broadcast journalism, advertising and/or public relations.

JRN 3350 Advertising Sales (3-3)
Discussion of and practical experience in servicing accounts and selling advertisements. May require selling ads for the Tropolitan. *Prerequisite: JRN 2220.*

JRN 3365 TV Studio Techniques and Producing (3-4)
An introduction to the production elements, theories and procedures of producing news broadcasts for television. Lighting, set design, preparation, operation of equipment, graphics, editing, responsibilities of those members involved in the production, electronic news gathering (ENG), operation of remote equipment and interviewing are topics discussed in this class.

JRN 4400 Special Topics in Journalism (1 to 3)
Lecture, discussion, and research course designed to acquaint students with special topics in the fields of broadcast and print journalism. May be taken for a maximum of six hours.

JRN 4401 Community Media Management (3-3)
Discussion of special problems and management techniques of print, broadcast, cable and public relations organizations.

JRN 4403 Radio News Practicum (3-6)
Supervised experience in gathering, writing and performing a daily radio news broadcast. Two hours per day plus a weekly one-hour discussion and evaluation. *Prerequisite or Co-requisite: JRN 2203.*

JRN 4405 Radio Production Practicum (3-6)
Supervised experience in radio studio work. Includes audio techniques for both public affairs and musical productions, tape editing, and use of automated programming. Two hours per day plus a weekly one-hour discussion and evaluation. *Prerequisite: JRN 2203.*

JRN 4410 Advanced Radio Practicum (3-6)
Emphasis on individualized work in radio news or production. *Prerequisite: JRN 4403 or 4405.*

JRN 4413 Television News Practicum (3-6)
Supervised experience in gathering, writing and performing reports for a daily television news broadcast. Two hours per day plus a weekly one-hour discussion and evaluation. *Prerequisite or co-requisite: JRN 2203.*

JRN 4415 Television Production Practicum (3-6)
Supervised experience in technical television work. Includes in-studio and remote camera operation, lighting, video tape editing and directing. Two hours per day plus a weekly one-hour discussion and evaluation. *Prerequisite: Junior standing or above.*

JRN 4419 Advanced Public Relations Tactics (3-3)
Practical experience in preparation of public relations messages for a client. *Prerequisite: JRN 3321. Co-requisite: JRN 4423.*

JRN 4420 Advanced Television Practicum (3-6)
Emphasis on individualized work in television news or production. *Prerequisite: JRN 4413.*

JRN 4421 The Editorial Page (3-4)
Editing and producing the editorial page, with extensive practice in writing the opinion column and editorial. *Prerequisite: JRN 2201.*

JRN 4423 Public Relations Campaigns (3-3)
Application of public relations theory and best practices resulting in the creation of a complete public relations campaign for a client. *Prerequisite: JRN 3321. Co-requisite: JRN 4419*

JRN 4425 Media Law (3-3)
The rights and restrictions of the press: the First Amendment, privilege, libel, slander, contempt, right of privacy, etc. *Prerequisite: Junior standing or above.*

JRN 4427 Sports Reporting (3-3)
Advanced methods, techniques, and writing styles for reporting sports news and information. *Prerequisite: JRN 2201.*

JRN 4430 Processes and Effects of Mass Communication (3-3)
This course provides students with an understanding of the development of the most notable, historical, social scientific and empirically grounded theoretical perspectives with regard to mass communication. In addition, analysis and interpretation of these theories will be addressed.

JRN 4440 Advanced Technologies in Journalism (3-4)
An introduction to using advanced technologies and on-line reporting techniques in journalism and public relations.

JRN 4489 Internship (5)
Full-time work experience as a regular staff member of a print publication, electronic media, public relations setting, advertising office, sports information operation, etc. Student will work under the supervision of an on-the-job supervisor and report to a Troy University faculty adviser who will monitor the work experience. Student will also prepare written and oral reports. *Prerequisite: Approval of the academic adviser and director of the School of Journalism, a minimum of 75 hours of course work, and successful completion of the journalism internship workshop prior to registering for JRN 4489.*

JRN 4490 Internship/Field Experience (variable credit 1-7 hours. Only one credit hour may be applied to a major in journalism or broadcast journalism.)
Full-time work experience as a regular staff member of a print publication, electronic media,

public relations setting, advertising office, or sports information operation. Student will work under the supervision of an on-the-job supervisor and report to a Troy University faculty adviser who will monitor the work experience. Student will also be required to prepare written and oral reports during the internship/field experience. *Prerequisites: Approval of the academic adviser and director of the School of Journalism. A minimum of 75 hours of course work. Corequisite: JRN 4489.*

JRN 4491-4492 Guided Independent Research (1 to 3 credit hours per course per semester)
Additional information is indexed under Guided Independent Research and Study.

JRN 4493-4494 Guided Independent Study (1 to 3 credit hours per course per semester)
Additional information is indexed under Guided Independent Research and Study.

JRN 4495 Seminar (1-1)
Study of issues related to ethics in journalism, public relations and advertising. *Prerequisite: Senior standing or permission of the instructor.*

KINESIOLOGY AND HEALTH PROMOTION COURSES (KHP)

KHP 1101 Badminton (1)
Physical education activity course.

KHP 1104 Golf (1)
Physical education activity course.

KHP 1107 Swimming (1)
Physical education activity course.

KHP 1108 Tennis (1)
Physical education activity course.

KHP 1109 Intermediate Swimming (1)
Physical education activity course.

KHP 1110 Paddle Tennis (1)
Physical education activity course.

KHP 1111 Archery (1)
Physical education activity course.

KHP 1112 Advanced Swimming (1)
Physical education activity course.

KHP 1122 Water Aerobics (1)
Physical education activity course.

KHP 1123 Synchronized Swimming (1)
Physical education activity course.

KHP 1124 Beginning Yoga (1)
Course will introduce students to yoga as a different type of exercise. Students will explore the opportunity for yoga to become a lifetime activity in order to promote health and wellness in their daily routines.

KHP 1133 Square Dance (1)
Physical education activity course.

KHP 1134 Ballroom Dance (1)
An introduction to social dancing with an emphasis on American ballroom dances (foxtrot, waltz, swing) and Latin ballroom dances (cha cha, mambo, tango). Equivalent to DAN 1134.

KHP 1138 Clog Dance I (1)
Physical education activity course.

KHP 1139 Aerobic Dance I (1)
Physical education activity course.

KHP 1141 Jogging (1)
Physical education activity course.

KHP 1142 Weight Training (1)
Physical education activity course.

KHP 1144 Step Aerobics (1)
Physical education activity course.

KHP 1146 Physical Defense for Women (1)
Physical education activity course.

KHP 2200 Health Concepts (1-1)
A study of health concepts that characterizes a process in the life cycle that is typical of every individual.

KHP 2201 Camping and Outdoor Education (2)
Camping, leadership and program planning.

KHP 2202 First Aid and Safety and CPRO (2-2)
Community first aid and safety instruction and CPRO for the professional following American Red Cross techniques.

KHP 2204 Intermediate Golf (1)
Physical education activity course.

KHP 2208 Intermediate Tennis (1)
Physical education activity course.

KHP 2212 First Aid and CPRO Recertification (1)
Community first aid and safety instruction and CPRO for recertification. *Prerequisite: Proof of certification in American Red Cross Community First Aid and Safety/CPRO within 1 year of start date of class. Permission of instructor or department chair.*

KHP 2223 Advanced Synchronized Swimming (1)
Physical education activity course.

KHP 2230 Rhythmic Activities for Special Populations (1)
Physical education activity course.

KHP 2238 Clog Dance II (1)
Physical education activity course.

KHP 2239 Aerobic Dance II (1)
Physical education activity course.

KHP 2240 Personal and Community Health (3)
Personal health as it applies to practices, knowledge and behavior.

KHP 2241 Intermediate Jogging (1)
Physical education activity course.

KHP 2242 Intermediate Weight Training (1)
Physical education activity course.

KHP 2250 Foundations of Health Science (1-1)
A study of the historical, philosophical and theoretical foundations of health education and health promotion, including the current status and projected trends in health education and promotion.

KHP 2251 Foundations of Physical Education and SFM (2-2)
A study of the history and principles of health education and physical education with particular emphasis placed on present practices and trends.

KHP 2252 Methods of Teaching Dance (3)
Social, folk and square dancing, including basic rhythmic activities which can be taught in elementary, middle and high schools. Equivalent to DAN 2252. *Prerequisite: Permission of instructor*.

KHP 2260 Applied Fitness Concepts (2-2)
Personal conditioning-based course focusing on training principles, modes of exercise, training tools, performance enhancers, measurement concepts and exercise prescription.

KHP 2263 Lifeguard Training (3-3)
Organization and teaching of the fundamental skills for water safety and the prevention of drowning. *Prerequisites: Advanced swimming or permission of instructor.*

KHP 2270 Intermediate Military Fitness and Exercise (2)
Students will develop overall cardio-respiratory fitness, muscular endurance and strength; plan and develop an individual physical training program; enhance individual knowledge of fitness and well being; and understand the principles of exercise and components of fitness.

KHP 3330 Physical Skills Proficiency (2-2)
This course covers rules, regulations, terms, origin, development, safety, equipment and performance of skills of specified sport activities including archery, badminton, gymnastics, soccer and volleyball which are related to KHP 4485/4486.

KHP 3331 Physical Skills Proficiency II (2-2)
This course covers rules, regulations, terms, origin, development, safety, equipment, and performance of skills of specified sport activities including basketball, golf, swimming, track and field, and tennis which are related to KHP 4485/4486.

KHP 3340 Principles of Recreation (3-3)
Overview of recreation on federal, state and local levels with respect to history, program, population, facilities and trends.

KHP 3350 Psychology of Wellness and Performance (3-3)
Theory and practical application of psychological factors that impact wellness and performance of individuals and groups.

KHP 3352 Kinesiology and Efficiency of Human Movement (3-3)
General anatomy, joint and muscle function, and analysis of body movements. *Prerequisites: KHP 3360 or BIO 3347 and 3348*

KHP3355 Introduction to Sport and Fitness Management (3)
This course is an introductory course for students who wish to enter the professional field of sport and/or fitness management. Students will be exposed to a variety of subjects related to sport and fitness management.

KHP 3360 Physiological Principles of Body Systems (3-3)
This course will examine the structure, function and control mechanisms of the following body systems: musculoskeletal, nervous, endocrine, cardiovascular, and respiratory. Metabolism, temperature regulation and fluid, electrolyte and acid base balance will also be discussed. *Prerequisites: BIO 1100/ L100 and CHM 1142/L142, PHY 2252/L252 or SCI 2233/L233.*

KHP 3361 Integrating HPER into the Curriculum (3)
Methods and materials of teaching physical education for grades K-6. *Prerequisite: EDU 3310*

KHP 3363 Lifeguard Training Instructor (3-3)
Review of all physical skills included in lifeguard training. Course will consist of theory and techniques of organizing and conducting the lifeguard training instructor course. *Prerequisite: KHP 2263.*

KHP 3368 Water Safety Instructor (WSI) (2-2)
Organization and teaching swimming and water safety programs. *Prerequisite: Swimming Certificate.*

KHP 3369 Scuba (2-4)
Basic techniques of scuba diving. *Prerequisite: Permission of the instructor. In addition to lab fee, a student is required to purchase mask, fins, snorkel, weight belt and weights. Students are also required to make two trips for final certification. The student will be responsible for the cost of transportation, food and lodging during the two trips.*

KHP 3391 Testing and Statistical Interpretation (3-3)
Test selection, analyzing test scores and measurement as a technique of evaluation in evaluation in health education and physical education. *Prerequisite: MTH 1112.*

KHP 3392 Water Safety Instructor for the Handicapped (l-1)
Organization and methods of teaching swimming to adapted students. *Prerequisite: A current valid WSI Certificate (Swimming Instructor Certificate).*

KHP 3395 Care and Prevention of Athletic Injury (2-2)
The study of basic care and prevention, evaluation, management and rehabilitation of athletic injuries. *Prerequisites: BIO 3347/L347 and 3348/L348 or KHP 3360.*

KHP 4400 Sports Officiating and Programs in Intramurals (3-3)
Focuses on school and community recreation programs, including sports, games and officiating techniques.

KHP 4405 Physical Activity and Disease Prevention (3)
This course will explore the link between physical activity and the major diseases experienced by modern day humans. Evidence for and against the potential benefits of physical activity will be reviewed for conditions such as coronary heart disease, cancer, stroke, diabetes, arthritis, low back pain, asthma, infection, high blood cholesterol, high blood pressure, obesity and stress. *Prerequisites: BIO 1100, L100. CHM 1142 and L142 or PHY 2252 and L252 or SCI 2233 and L233. KHP 3360.*

KHP 4410 Motor Development (3)
An analysis of the ways in which children develop movement capabilities. *Prerequisite: Junior standing or above.*

KHP 4427 Health Behavior (3-3)
The theoretical foundations of health behavior and evaluation and their application to health practice. *Prerequisite: KHP 2240.*

KHP 4430 Sport and Fitness Marketing (3)
Course is designed to introduce the student to marketing practices of sport and fitness organizations. The course will review terminology, systems, techniques, and processes that are used in the specialized application of sport and fitness marketing and to encourage students to consider how traditional marketing strategies may be applied to this substantial and growing industry. *Prerequisite: KHP 3355 or permission of instructor.*

KHP 4435 Current Issues in Sport and Fitness Management (3)
Course is designed to serve as a mechanism for the introduction of new information and technology issues for the sport industry. This course will encourage the undergraduate student in sport and fitness management to remain current with contemporary developments in the sports industry. *Prerequisite: KHP 3355.*

KHP 4440 Governing Agencies in Sport (3)
Course is designed to provide the student with information concerning basic structure and governing principles of various sport agencies. The course will include, but is not limited to, an examination of the National Collegiate Athletic Association, National Association of Intercollegiate Athletics, professional sports leagues in the United States and Europe. *Prerequisite: KHP 3355 or permission of instructor.*

KHP 4442 Health Education (3-3)
Course focuses on school health organization, services and institutions, grades N-12. *Prerequisite: Admission to Teacher Education Program.*

KHP 4443 Sport Administration (3)
Organization and administration of sport management, recreation and athletic training programs. *Prerequisite: Permission of instructor.*

KHP 4450 Event Management (3)
This course is designed to give advanced students the opportunity to plan, prepare and administer sport and fitness related events. Students will gain practical experiences in event management including planning, organizing, implementing, evaluating, directing personnel, securing sponsorships, and marketing for multiple events. *Prerequisite: 12 semester hours of 4400-level KHP courses.*

KHP 4451 Sport Finance and Business (3)
This course is designed to provide the student with information concerning the basic theories of finance and accounting as applied to managerial control of sport organizations. Included are forms of ownership, taxation, financial analysis, feasibility studies, licensing, and economic impact studies. *Prerequisite: KHP 3355 or permission of instructor.*

KHP 4452 Sport Communications (3)
The application of communication theories to the sport industry. Examination of public and media relations with a special focus on message development, image building and crisis management for sport organizations.

KHP 4453 Legal Aspects in Sport and Fitness Management (3)
In this course the student will gain an appreciation

for the legal and business matters that pertain to sport/fitness and related areas. Students will acquire working awareness and understanding of the basic legal and business responsibilities of coaches, sports managers and fitness practitioners, along with an understanding of the legal terms, concepts and issues that influence the management of programs. Students will also develop appreciation for business elements of sport/fitness, which encroach upon the law.

KHP 4455 Facility Management (3)
This course is designed to provide the student with information concerning the planning, design, organization, and administration of sport, fitness, and recreational facilities as well as event management. *Prerequisite: KHP 3355 or permission of instructor.*

KHP 4457 Global Sport Management (3)
This course allows students to obtain a global sport and fitness management perspective by traveling and studying abroad. Classroom lectures, field trips and presentations from international sport professionals and academicians will supplement the cultural experience. *Prerequisites: Successful completion of Troy Study Abroad Program requirements and fees, KHP 3355 and six semester hours of KHP 4400-level courses or permission of instructor.*

KHP 4459 Sport and Exercise Nutrition (3)
This course examines the special dietary requirements of physically active individuals and athletes in training. The course will cover the basics of nutrition and bioenergetics along with current issues such as fad diets and disordered eating, precompetition meals, sports drinks, mineral supplements, and other various ergogenic aids. *Prerequisites: BIO 1100, L100. CHM 1142 and L142 or PHY 2252 and L252 or SCI 2233 and L233. KHP 3360*

KHP 4460 Principles of Strength and Conditioning (3)
This course will enable the student to develop knowledge and expertise in the areas of strength training, cardiovascular endurance, flexibility, reaction time, speed, and agility in traditional and non-traditional sports. Emphasis will be placed on implementation and measurement of the above programs in conjunction with athletic development. *Prerequisites: KHP 3360 or BIO 3347 and 3348, and KHP 3352. Co-requisite: KHP L460.*

KHP L460 Principles of Strength and Conditioning Lab
This lab is designed to develop practical knowledge and expertise in the areas of strength training, cardiovascular endurance, flexibility, reaction time, speed, and agility in traditional and non-traditional sports. Emphasis will be placed on implementation and measurement of the above programs in conjunction with athletic development. *Prerequisite: KHP 3360 or BIO 3347 and 3348, and KHP 3352. Co-requisite: KHP 4460.*

KHP 4462 Physical Education for Exceptional Children (3)
This course explores programs to serve the needs of the exceptional child in schools. *Prerequisite: Admission to the Teacher Education Program*

KHP 4465 Classroom Management and Organization for HPE (3)
This course will explore the issues of organization, curriculum, and classroom management as they relate to the physical education environment. Directed field requirements will be presented and observation hours will be conducted. *Prerequisite: Admission to the Teacher Education Program*

KHP 4470 Theory and Techniques of Coaching Softball (2-2)
Development of basic skills necessary for team play, squad organization, rules, scouting procedures, team conditioning, and equipment needs.

KHP 4472 Internship in Health/Physical Education (9)
The Professional Internship Program is the culminating clinical field-based experience for students seeking certification in a teaching field. The Professional Internship Program provides the student with the opportunity to conduct classes and assume the role of a teacher while receiving supervision from a classroom teacher and a university supervisor for a period of one full semester. The student will demonstrate skills of the informed, reflective decision maker throughout the internship experience. *Prerequisite: Admission to TEP. Co-requisite: IED 4454.*

KHP 4474 Exercise Physiology (3-3)
Physiological mechanisms and adaptations of cells, tissues, organs and systems during physical activity. *Prerequisite: KHP 3360 or BIO 3347/L347 and BIO 3348/L348, and KHP 3391.*

KHP L474 Exercise Physiology Lab (1-1)
Course will provide experience for applied exercise physiology principles as students are introduced to laboratory and field tests of muscular strength, anaerobic power, maximal oxygen uptake, body composition and other physiological measurements. *Prerequisite: KHP 4474.*

KHP 4475 Exercise Testing and Prescription (3-3)
Course will examine the criteria for evaluation of health status of persons wishing to begin an exercise program, guidelines of establishing current fitness level, and the basic principles of exercise prescription. Levels of certification and criteria by ACSM will also be discussed. *Prerequisite: KHP 4474.*

KHP 4476 Laboratory Practicum in Exercise Performance (2-2)
Students will be introduced to some of the measurement techniques routinely used in exercise physiology and will gain practical experience in administration of these tests. Emphasis will be placed on how to avoid measurement errors. *Prerequisite: KHP 4474.*

KHP 4477 Theory and Techniques of Coaching Football (2-2)
Offensive and defensive techniques, purchase and care of equipment, budgeting, ethics, rules, scouting and team conditioning.

KHP 4478 Theory and Techniques of Coaching Soccer (2-2)
The development of basic skills necessary for team play, squad organization, rules, scouting procedures, term conditioning and equipment needs.

KHP 4479 Theory and Techniques of Coaching Volleyball (2-2)
Offensive and defensive techniques, purchase and care of equipment, budgeting, squad organization, rules, scouting and team conditioning.

KHP 4480 Theory and Techniques of Coaching Track and Field (2-2)
Teaching of basic fundamentals of track and field activities.

KHP 4481 Methods and Materials for the Secondary School Physical Education or Health Teacher (3-3)
Teaching methods, selection, organization and use of physical education or health materials in secondary schools. Observation and teaching experiences will be included. *Prerequisite: Admission to the Teacher Education Program or permission of instructor.*

KHP 4482 Theory and Techniques of Coaching Basketball (2-2)
Offensive and defensive techniques, purchase and care of equipment, budgeting, squad organization, rules, scouting and team conditioning.

KHP 4483 Theory and Techniques of Coaching Baseball (2-2)
Offensive and defensive techniques, purchase and care of equipment, budgeting, batting and field drills, rules, scouting and team conditioning.

KHP 4485 Teaching Individual and Team Sports (3-3)
Teaching methods, techniques, and officiating archery, badminton, gymnastics, soccer and volleyball. *Prerequisites: KHP 3330, 3331, 3352 and admission to the Teacher Education Program or permission of instructor.*

KHP 4486 Teaching Individual and Team Sports (3-3)
Teaching methods, techniques, and officiating basketball, golf, swimming, track and field, and tennis. *Prerequisites: KHP 3330, 3331, 3352 and admission to the Teacher Education Program or permission of instructor.*

KHP 4487 Special Topics in Exercise Performance (2-2)
An intensive study of selected topics in exercise science. Topics to be taught each term TBA. *Prerequisite: KHP 4474 or permission of instructor.*

KHP 4488 Issues and Practice in Cardiac Rehabilitation (3-3)
Course will examine the policies and procedures of cardiac rehabilitation programs. Students will be introduced to the phases of cardiac rehabilitation programs, administration and reporting of graded exercise stress tests, administration of exercise sessions, reporting procedures, and techniques of successful patient educational programs. *Prerequisite: KHP 4474.*

KHP 4490 Internship in Area of Concentration (6)
A supervised experience in planning, staging and evaluating a formal practicum in related field. *Prerequisite: KHP 4443, 4499, Permission of the department chair.*

KHP 4491-4492 Guided Independent Research (1-3)
Additional information is indexed under Guided Independent Research and Study.

KHP 4493-4494 Guided Independent Study (1-3)
Additional information is indexed under Guided Independent Research and Study.

KHP 4499 Seminar in Sport (3)
Students enrolled in the course will complete resumes, attend professional meetings, and be informed of certification dates and locations. *Prerequisites: Permission of instructor.*

KOREAN COURSES (KOR)

KOR 1101 Introductory Korean I (3-3)
Introduction to the Korean Language.

KOR 1102 Introductory Korean II (3-3)
Introduction to the Korean Language. *Prerequisite: KOR 1101 or permission of instructor.*

KOR 2201 Intermediate Korean I (3-3)
Progressive development of basic language skills in Korean. *Prerequisite: KOR 1102 or permission of instructor*.

KOR 2202 Intermediate Korean II (3-3)
Progressive development of basic language skills in Korean. *Prerequisite: KOR 2201 or permission of instructor*

LATIN COURSES (LAT)

Note: For additional information, see Placement in Academic Courses.

LAT 1131 Introductory Latin I (3)
Introduction to the Latin language with emphasis on pronunciation, basic vocabulary, fundamentals of grammar, and graded readings.

LAT 1132 Introductory Latin II (3)
Continuation of LAT 1131. *Prerequisite: LAT 1131 or permission of instructor.*

LAT 2231 Intermediate Latin I (3)
Continuation of LAT 1131-1132. *Prerequisite: LAT 1132 or permission of instructor.*

LAT 2232 Intermediate Latin II (3)
Continuation of LAT 2231, culminating in the reading of authentic passages from selected Latin authors. *Prerequisite: LAT 2231 or permission of instructor.*

LAT 3331 Readings in Latin Literature (3)
Readings in a selected author, period, or genre. *Note: May be repeated for credit. Prerequisite: LAT 2232 or permission of instructor.*

LAW COURSES (LAW)

LAW 2221 Legal Environment of Business (3)
This course is an introduction to the fundamental concepts, principles, and rules of law and equity that apply to business activities. This course provides an overview of law in general, the American legal system, federal and state court procedures, effects on law-making by legislative, judicial, and administrative procedures. The course may also include constitutional law, business ethics, contracts, products liability, sales and commercial paper.

LAW 3323 Advanced Business Law (3)
This course provides a continued study of additional legal concepts, principles, and rules of law and equity that apply to business institutions. It provides an overview of commercial paper, business organizations, secured transactions, regulations of business, and real and personal property. *Prerequisite: Law 2221.*

LEADERSHIP COURSES (LDR)

LDR 1100 Introduction to Leadership (3)
This course helps students apply leadership knowledge, skills and techniques to campus and community activities. Practical exercises, role-playing, class interaction and lecture / discussion with established leaders reinforce learning and aid each student in developing a personal leadership plan.

LDR 2200 Tools for Leaders (3)
This course helps developing leaders use tools essential to effective leadership including briefing, writing, delegation, media relations, meeting management and group dynamics skills. *Prerequisite: Sophomore standing and permission of the Director, Institute for Leadership Development.*

LDR 3300 Leadership Theory (3)
This course helps students understand and apply what writers, theorists and leaders tell us about how to lead effectively in a rapidly changing world. The course also exposes students to what leaders are reading. Experienced leaders will provide guest instruction. *Prerequisite: LDR 2200 or permission of the Director, Institute for Leadership Development*

LDR 4400 Leadership Seminar (3)
A capstone course that includes principles, practices and presentations by experienced leaders from the public and private sectors. This course helps developing leaders synthesize knowledge and prepare for future leadership challenges. *Prerequisites: Leadership minor or enrollment in the University Honors Program or permission of instructor.*

LDR 4402 Leadership Seminar Field Experience (2)
This course includes field trips to visit CEOs, senior state government officials and military leaders, as well as business and dinner etiquette training and one-on-one mentoring by campus faculty and administrative leaders. This course is open to a limited number of developing leaders who have been active in campus and/or community activities. *Prerequisite: permission of instructor. Corequisite: LDR 4400.*

LDR 4403 Contemporary Issues in Leadership (1)
Discussion of contemporary and historical leadership issues with a focus on understanding the nature of effective leadership. Students will be expected to complete a significant number of selected readings and engage in detailed discussion as part of this class. This class may be repeated once for credit. *Prerequisite: LDR 2200 and permission of Instructor.*

LDR 4444 Leadership Internship (3-6 hours, may be repeated for no more than 6 total hours)
Supervised internship in an office or location approved by the Director of the Institute for Leadership Development, resulting in deliverables agreed upon by the Director and intern. *Prerequisites: junior or senior status, permission of adviser, and approval of the Director of the Institute for Leadership Development. Students will submit a written request to the Director at least two weeks in advance of the term in which study is to be undertaken.*

LDR 4450 Leadership Service Learning (1-6 hours, may be repeated for no more than 6 total hours)
Supervised service learning leadership on a project with an agency or aligned with a service organization as approved by the Director of the Institute for Leadership Development. *Prerequisites: junior or senior status (or granting of exception by the Director), permission of adviser, and approval of the Director of the Institute for Leadership Development. Students will submit a written request to the Director at least two weeks in advance of the term in which study is to be undertaken.*

LDR 4493/94 Guided Independent Study (1-3 hours variable credit)
Supervised study through field or laboratory projects, guided readings, creative endeavors or achievement of specific skills. *Prerequisites: Jun-*

ior or senior status, permission of guiding professor, and approval of instructor. A written request must be submitted to the instructor at least two weeks in advance of the term in which study is to be undertaken. May not be used to repeat a course in which a grade of D or below has been earned.

MARINE BIOLOGY COURSES (MB)

Offered at Dauphin Island Sea Lab (DISL) only

Courses are offered during the summer semester only. Because course offerings change, check current DISL summer bulletin for specific course offerings and descriptions.

MB 3301 Marine Biology (4)
A general survey of marine plants, invertebrates, and vertebrates, the communities that they form and the physical and chemical factors that influence them. *Prerequisites: BIO 1101, L101, CHM 1143, L143.*

MB 4402 Marine Invertebrate Zoology (4)
A study of the natural history, systematics, and morphology of marine invertebrates from a variety of habitats in the Gulf of Mexico. Participation in extended field trips is a required part of the course. *Prerequisites: BIO 1101, L101, 2229, L229, CHM 1143, L143.*

MB 4403 Marine Vertebrate Zoology (4)
Biology of marine vertebrates emphasizing systematics, behavior, physiology, and ecology of local forms. *Prerequisites: BIO 1101, L101, 2229, L229, CHM 1143, CHM L143.*

MB 4404 Marine Botany (4)
A general survey of algae and vascular plants associated with the marine and estuarine environment. *Prerequisites: BIO 1101, L101, 2229, L229, CHM 1143, L143.*

MB 4406 Marsh Ecology (4)
A study of the floral and faunal elements of various marine marsh communities. *Prerequisites: BIO 1101, L101, 2229, L229, CHM 1143, L143.*

MB 4410 Introduction to Oceanography (4)
A general introduction to the physics, chemistry, geology, and biology of the oceans. *Prerequisites: BIO 1101, L101, 2229, L229, CHM 1143, L143.*

MB 4416 Marine Fish Diseases (2)
Introduction to aquatic animal diseases, specifically fin fish and shellfish. Student will learn practical microbiological techniques for isolation and identification. *Prerequisites: BIO 1101, L101, 2229, L229, CHM 1143, L143.*

MB 4418 Marine Behavioral Ecology (4)
Examination of how animal behavior is influenced by and interacts with its environment, and the ecological and evolutionary significance of these behaviors in a marine setting. *Prerequisites: BIO 1101, L101, 2229, L229, CHM 1143, L143.*

MB 4421 Marine Technical Methods (2)
An introduction to the techniques, instrumentation and equipment necessary to perform marine research, emphasizing field methods. *Prerequisites: BIO 1101, L101, 2229, L229, CHM 1143, L143.*

MB 4423 Marine Ecology (4)
Lecture and laboratory studies of bioenergetics, community structure, population dynamics, predation, competition, and speciation in marine ecosystem. *Prerequisites: BIO 1101, L101, 2229, L229, CHM 1143, L143.*

MB 4425 Coastal Ornithology (4)
Study of coastal and pelagic birds with emphasis on ecology, taxonomy, and distribution. *Prerequisites: BIO 1101, L101, 2229, L229, CHM 1143, L143.*

MB 4426 Coastal Zone Management (2)
A review of ecological features and management policies for coastal communities, with a description of relevant state and federal programs. *Prerequisites: BIO 1101, L101, 2229, L229, CHM 1143, L143.*

MB 4430 Dolphins and Whales (2)
Lectures, audiovisual presentations, and practical exercises to guide students to further study of cetaceans. *Prerequisites: BIO 1101, L101, 2229, L229, CHM 1143, L143, BIO 4432, L432 or MB 4403.*

MB 4434 Marine Geology (4)
A study of the geology of the ocean basins, with special emphasis on the continental shelves, their sediments, and the sedimentary processes at work there. Prerequisites: *BIO 1101, L101, 2229, L229, CHM 1143, L143, introductory geology and MTH 4423.*

MB 4435 Coastal Geomorphology (2)
An introduction to coastal sediment processes and applied geomorphology with emphasis on waves, tides, and sediments. *Prerequisites: BIO 1101, L101, 2229, L229, CHM 1143, L143.*

MB 4437 Coastal Climatology (2)
Study of the controlling factors and features of the world's climates, with particular attention to coastal areas and application and interpretation of climate data. *Prerequisites: BIO 1101, L101, 2229, L229, CHM 1143, L143.*

MB 4460 Introduction to Neurobiology (4)
The study of the structure, development, physiology, and pharmacology of the nervous systems and sense organs. *Prerequisites: BIO 4478, L478, PHY 2253, L253.*

MANAGEMENT COURSES (MGT)

MGT 3371 Principles of Management (3)
An introduction to management functions, principles, and techniques. The course includes a discussion of planning, organizing, influencing through leadership, and control within the organization. *Prerequisites: ECO 2252.*

MGT 3372 Hospitality Management (3)
A survey course providing an overview of the industry, its history, problems and general operating procedures. *Prerequisite: MGT 3371.*

MGT 3373 Operations Management (3)
A study of how organizational processes add value as they convert inputs to outputs. Topics covered include the strategic relationship of operations with other functional organizations, value chain concepts, quantitative methods of operations, including forecasting models, inventory models, statistical process control, process models and project management methods. The course also provides a review of current supply chain philosophies such as JIT, MRP, and EOQ inventory management methods. *Prerequisites: MGT 3371, QM 3341.*

MGT 3374 Hotel Management (3)
This course prepares students to manage basic hotel operations including hotel organization, rooms, housekeeping, engineering and security, food and beverage, marketing, and financial control. *Prerequisite: MGT 3372.*

MGT 3375 Human Resource Management (3)
A survey of the major activities of human resource management function including recruiting, selection, placement, training, compensation, employee representation, and current issues. A prerequisite for 4000-level HRM courses. *Prerequisite: MGT 3371.*

MGT 3377 Domestic and International Tourism (3)
An introduction to the broad fields of travel and tourism. Topics include cultural tourism, ecotourism, sociology of tourism, tourism components and supply, tourism development, the economic role of tourism demand, the marketing of tourism, and an introduction to the international scope of travel and tourism. *Prerequisite: MGT 3372.*

MGT 4451 Supply Chain Management (3)
This course presents an overview of supply operations of the organization and management of the distribution process from supplier to end user. Topics covered include: materials procurement policies and procedures, supply and distribution processes, development of materials specifications and statements of work, procedures for materials sourcing on a global scale, competitive bidding, price/cost analysis, and electronic procurement methods. *Prerequisite: MGT 3373.*

MGT 4452 Supply Chain Management Information Systems (3)
This course presents a study of the planning and control systems used to manage the flow of products and services along the supply chain. Topics include: master scheduling, materials requirements planning (MRPI and MRPII), enterprise resource planning (ERP), inventory management and e-commerce. *Prerequisite: MGT 4451.*

MGT 4453 Supply Chain Strategy (3)
This is a capstone course that integrates those supply chain techniques and principles essential for achieving sustainable competitive advantage in a global marketplace. Topics covered include: design and structure of the global supply chain, relationships among supply chain members, supplier selection, contract administration, electronic commerce and international shipping regulations and procedures. *Prerequisites: MGT 4465, 4451, 4452.*

MGT 4455 Employment Law (3)
A study of the major employment laws and related regulations as they apply to the private sector. *Prerequisite: MGT 3371*

MGT 4460 Introduction to Project Management (3)
This course provides an introduction to essential principles governing effective project management and an application of tools and techniques that can be applied to defining projects, establishing task structure, planning and budgeting, managing of resources to achieve the project objectives, and post -project evaluation. *Prerequisites: MGT 3371 and MGT 3373.*

MGT 4465 Food and Beverage Service (3)
Study of basic and intermediate commercial food production management skills required in menu design along with food and beverage cost control. *Prerequisite: MGT 3372.*

MGT 4466 Restaurant Management (3)
Study of the basics of restaurant management to include organization, facilities design, equipment and environmental considerations, food safety, operational functions, and management. *Prerequisite: MGT 3372.*

MGT 4471 Organizational Development (3)
Examines the various applied behavioral science approaches to handling and managing change in organizations. Topics discussed include the theory, values, and approaches to organizational development, planned change, work styles, and interpersonal analysis. *Prerequisite: MGT 3371.*

MGT 4472 Organizational Behavior (3)
A study of individual and group behavior in business organizations. *Prerequisite: MGT 3371.*

MGT 4473 Labor Law and Collective Bargaining (3)
A study of court decisions, national labor, administrative regulations, and procedures of the National Labor Relations Board that guide effective ap-

proaches to collective bargaining and labor relations. *Prerequisite: MGT 3371.*

MGT 4474 Business and Society (3)
Focuses on the interrelationships which exist between business organizations and the environment in which they operate. Significant relationships of business and society in the past, present, and probable future will be examined. General areas discussed include business ethics, social responsibility, and relationships with government, education, and labor unions. *Prerequisite: MGT 3371.*

MGT 4475 Small Business Management (3)
Detailed analysis of the creation and management of small business entities. The dynamics of operating small businesses successfully is presented. Emphasizes entrepreneurial opportunities, new venture processes, and managerial activities needed for the successful operation of small business. *Prerequisite: MGT 3371.*

MGT 4476 Strategic Management (3)
Capstone course for business majors. Integrates knowledge, skills, and concepts acquired in all business courses taken. Requires students to analyze various corporations, determine threats and opportunities posed by the external environment as well as the firm's strengths and weaknesses, formulate strategic plans for firms, and determine how these plans should be implemented. *Prerequisites: Senior standing; completion of or concurrent enrollment in remaining business core courses.*

MGT 4478 International Management (3)
A survey and analysis of topics important to successfully managing internationalized business operations. Included in the course are considerations of environmental analysis, modes of entry, planning and cross-cultural issues in directing, decision-making, organizing and staffing operations in multinational enterprises. *Prerequisite: MGT 3371.*

MGT 4479 Management Seminar (3)
Capstone course for management majors. Analysis of current problems and issues in management. *Prerequisite: MGT 3371, 3373, 3375, 4472.*

MGT 4480 Technology and Innovation Management (3)
The course investigates the strategic implications of technology and innovation for manufacturing and service organizations that operate in dynamically changing environments. The course provides a comprehensive study of leading-edge product and process technologies, emerging organizational and social issues that influence the adoption of technology, methods for forecasting future trends in technology, and current concepts and methods for managing technology and motivating innovation. *Prerequisite: MGT 3373.*

MGT 4481 Staffing (3)
Addresses theory, principles, practices, and legal requirements for effective recruitment, selection, and promotion in organizational settings. *Prerequisite: MGT 3371.*

MGT 4482 Managing Health, Safety and Diversity (3)
This course addresses the theory, practice and legal requirements in managing employee health, safety, and cultural diversity in organizational settings. *Prerequisite: MGT 3371.*

MGT 4483 Human Resource Development (3)
Theory and practice in human resource training and development applied to organizational settings. *Prerequisite: MGT 3371.*

MGT 4485 Performance Appraisal and Compensation (3)
Addresses theory, principles, practices, and legal requirements linking effective performance management and compensation and benefit systems in organizational settings. *Prerequisite: MGT 3371.*

MGT 4490 Total Quality Management (3)
An overview of the strategies and means used by leading companies throughout the world to obtain outstanding quality results and strong competitive positions. Focuses on the continuous improvement of quality of product and service, and the resulting benefits in reduced costs, increased productivity, and higher levels of customer satisfaction. *Prerequisites: MGT 3373 and QM 3341.*

MGT 4491-4492 Guided Independent Research (1-3 credit hours per course per semester.)
Additional information is indexed under Guided Independent Research and Study. Note: This course may not be substituted for any required course.

MGT 4493-4494 Guided Independent Study (1-3 credit hours per course per semester)
Additional information is indexed under Guided Independent Research and Study. Note: This course may not be substituted for any required course.

MGT 4496 Selected Topics in HR (3)
An in-depth study of a broad range of human resource management topics. Individual investigations and reporting are emphasized in seminar fashion. Focus on a topic of a timely nature and/or special interest. *Prerequisite: MGT 3371.*

MARKETING COURSES (MKT)

MKT 3361 Principles of Marketing (3)
A managerial focus on the external environments and decision elements of marketing (promotion, price, product, distribution) faced by marketing management at the corporate and entrepreneurial levels of business.

MKT 3362 Advertising (3)
The planning, creation, utilization, and place of advertising programs, media use, and research to support marketing strategy. *Prerequisite: MKT 3361.*

MKT 3363 Transportation Management (3)
Management considerations in selection and effective utilization of various modes of transportation. *Prerequisite: MGT 3371; MKT 3361.*

MKT 3364 Services Marketing (3)
Understand the nature of services marketing and its critical contribution to marketing success. Topics include customer expectations and perceptions in the design of service processes and standards. *Prerequisite: MKT 3361.*

MKT 3365 Integrated Marketing Communications (3)
Course examines integrated marketing communications and how this enhances brand equity. Emphasis is placed on the decision sequence a manager would follow in planning, developing, and implementing a marketing communications program. *Prerequisite: MKT 3361.*

MKT 4461 Personal Selling (3)
An applied course that introduces the economic, psychological, and social aspects of personal selling, direct selling techniques, and the sales process with emphasis on building customer relationships. *Prerequisite: MKT 3361.*

MKT 4462 Consumer Behavior (3)
A study of the consumer as a decision maker. The course examines social, cultural, and psychological influences on purchasing decisions while emphasizing their implications for marketing strategies. *Prerequisite: MKT 3361.*

MKT 4463 Retailing (3)
Principles and practices of retail management. The course examines retail store location, purchasing, personnel, promotions, inventory management, and Internet marketing. *Prerequisite: MKT 3361.*

MKT 4464 Marketing Research (3)
Methods and procedures for collection, interpretation, and use of primary and secondary data in marketing including sampling, questionnaires, data collection, analysis, and preparation of reports. *Prerequisite: MKT 3361.*

MKT 4465 Business Logistics (3)
A study of the procurement, warehousing, and transportation activities related to distribution system design, operation, and control. *Prerequisite MKT 3361.*

MKT 4466 Direct Marketing (3)
Principles and techniques in planning, creating and producing consumer-direct communications to reach and deliver goods and services to customers. *Prerequisite: MKT 3361.*

MKT 4467 Sales Management (3)
A study of the management of the personal selling functions. Emphasis is on the sales process including recruitment, training, organization, motivation and retention of sales force. *Prerequisite: MKT 3361.*

MKT 4468 International Marketing (3)
Decision making and policy formulation relative to the cultural, social, political, legal and economic aspects of marketing in global environments. *Prerequisite: MKT 3361.*

MKT 4469 Marketing Management (3)
This is the capstone course for marketing major students. Focus is on marketing management problem solving by applying marketing concepts, procedures and practices learned. Vehicles to deepen this decision-making approach will include text, cases and simulations. *Prerequisite: 15 SH in marketing courses beyond MKT 3361.*

MKT 4481 Internet Marketing I (3)
Focuses on the opportunities and changes inherent in the Internet market. Includes a brief overview of the tools and technology that make it possible and how the Internet should and can impact marketing strategy. *Prerequisite: MKT 3361.*

MKT 4482 Internet Marketing II (3)
A practicum cyber-incubator offered as an opportunity to manage a simulated business on the Internet. Skill development will focus on tools necessary to conduct business over the Internet. *Prerequisite: MKT 4481.*

MKT 4487 Hospitality Marketing (3)
Study of marketing principles as applied to the hospitality industry. *Prerequisite: MGT 3372.*

MKT 4491-4492 Guided Independent Research (1-3 credit hours per course per semester.)
Additional information is indexed under Guided Independent Research and Study. Note: This course may not be substituted for any required course.

MKT 4493-4494 Guided Independent Study (1-3 credit hours per course per semester)
Additional information is indexed under Guided Independent Research and Study. Note: This course may not be substituted for any required course. Also see index for Independent Study and Research.

MKT 4495 Selected Topics in Marketing (3)
An in-depth study of a broad range of marketing topics. Individual investigations and reporting emphasized in seminar fashion. Focuses on a topic of a timely nature and/or special interest. *Prerequisite: MKT 3361.*

MILITARY SCIENCE AND LEADERSHIP COURSES (MSL)

MSL 1101 Foundations of Officership (1)
This course features an introduction to life in the U.S. Army. Topics include leadership, the unique duties and responsibilities of officers, the organiza-

tion and role of the Army, basic life skills pertaining to fitness and communication, and an analysis of Army values and expected ethical behavior. *Co-requisite: MS 1104a.*

MSL 1102 Basic Leadership (1)
This course provides students with a basic knowledge of common military skills and presents the fundamental leadership concepts and doctrine of the U.S. Army. Topics include the practice of basic skills that underlie effective problem solving, application of active listening and feedback skills, examination of factors that influence leader and group effectiveness, and an examination of the officer experience. *Co-requisite: MS 1104b.*

MSL 1104 Leadership Lab (1)
Leadership lab is required for Army ROTC students. The student will receive training in drill and ceremonies, field craft, individual movement techniques, squad tactics, map reading and land navigation, first aid, and use and maintenance of the M16 Rifle.

MSL 1105 Leadership Lab (1)
Leadership lab is required for Army ROTC students. The student will receive training in drill and ceremonies, field craft, individual movement techniques, squad tactics, map reading and land navigation, first aid, and use and maintenance of the M16 Rifle.

MSL 2201 Individual Leadership Studies (2)
This course develops the knowledge of self, self-confidence and individual leadership skills as well as develops problem solving and critical thinking skills and the application of communication, feedback, and conflict resolution. Emphasized areas include personal development, goal setting, communication, problem solving and decision-making, leadership, teamwork, the group process, stress management, and physical fitness. *Co-requisite: MS 2204a.*

MSL 2202 Leadership and Teamwork (2)
This course focuses on self-development guided by knowledge of self and group processes by focusing on challenging current beliefs, knowledge and skills. *Co-requisite: MS 2204b.*

MSL 2204 Leadership Lab (1)
Leadership lab is required for Army ROTC students. The students will receive training in drill, physical training, rappelling, water survival, tactics, marksmanship, night operations, and land navigation.

MSL 2205 Leadership Lab (1)
Leadership lab is required for Army ROTC students. The students will receive training in drill, physical training, rappelling, water survival, tactics, marksmanship, night operations, and land navigation.

MSL 3301 Leadership and Problem Solving (3)
This course examines the basic skills that underlie effective problem solving by analyzing the role officers played in the transition of the Army from Vietnam to the 21st Century, analysis of military missions and the planning of military operations, the features and execution of the Leadership Development Program, and the execution of squad battle drills. *Co-requisite: MS 3304a.*

MSL 3302 Leadership and Ethics (3)
This course probes leader responsibilities that foster an ethical command climate by developing cadet leadership competencies and applying principles and techniques of effective written and oral communication. Students are prepared for success at the ROTC National Advanced Leadership Course. *Co-requisite: MS 3304b.*

MSL 3304 Leadership Lab (1)
Leadership Lab is required for all Army ROTC students. The student will receive training in troop-leading procedures, mission planning, squad tactics, land navigation, individual movement techniques, water survival and rappelling.

MSL 3305 Leadership Lab (1)
Leadership Lab is required for all Army ROTC students. The student will receive training in troop-leading procedures, mission planning, squad tactics, land navigation, individual movement techniques, water survival and rappelling.

MSL 4401 Leadership and Management (3)
This course builds on the experience gained at the National Advanced Leadership Course in order to solve organizational and staff problems and discusses staff organization and functions, analysis of counseling responsibilities and methods, the principles of subordinate motivation and organizational change. Students will apply leadership and problem solving principles to a case study and or simulation. *Co-requisite: MS 4404a.*

MSL 4402 Officership (3)
This course is designed to explore topics relevant to Second Lieutenants entering the U.S. Army and focuses on the legal aspects of decision making leadership, analyzing Army organization from the tactical to the strategic level, assessing administrative and logistical functions, performance of platoon leader actions, and an examination of leader responsibilities that foster an ethical command climate. *Co-requisite: MS 4404b.*

MSL 4404 Leadership Lab (1)
Leadership lab is required for all Army ROTC students. The student will receive training in troop-leading procedures, mission planning, squad tactics, land navigation, individual movement techniques, water survival and rappelling.

MSL 4405 Leadership Lab (1)
Leadership lab is required for all Army ROTC students. The student will receive training in troop-leading procedures, mission planning, squad tactics,

land navigation, individual movement techniques, water survival and rappelling.

MEDICAL TECHNOLOGY COURSES (MT)

(Offered in hospital internship only)

MT 4400 Clinical Urinalysis (1)
The imparting of skills for performing and interpreting routine urinalyses as well as special urinalysis procedures.

MT 4401 Clinical Urinalysis Lab (1)
This lab section includes specimen handling, procedure manual, audio-visual, quality control, record keeping, and reporting system.

MT 4402 Clinical Microbiology (4)
This lecture course covers areas of bacteriology, mycology, and virology.

MT 4403 Clinical Microbiology Lab (2)
This lab teaches identification methods, isolation methods, and current clinical techniques for working with bacteria, molds, viral, and rickettsial organisms.

MT 4404 Clinical Parasitology (1)
Discussions concerning proper collection and handling of specimens for detection of parasites, techniques used to detect parasites and morphological features, and life cycles of important organisms.

MT 4405 Clinical Parasitology Lab (1)
Use of the laboratory procedures and techniques for isolation and identification of parasitic organisms.

MT 4406 Clinical Hematology (4)
Detailed studies of blood, including cell types, functions, number of cells, clotting mechanisms, coagulation disorders, platelet disorders, and other pertinent topics.

MT 4407 Clinical Hematology Lab (2)
Special studies and training involving cell counts, hemoglobin and hematocrit determinations, and other special hematology procedures.

MT 4408 Immunohematology (3)
This block involves blood banking, studies of the ABO blood group system, the Rh system, blood typing, antibody studies, and effects of transfusion.

MT 4409 Immunohematology Lab (1)
Blood banking studies and techniques. Clinical applications of procedures under direct supervision.

MT 4410 Clinical Serology (2)
Lectures emphasizing the principles and interpretations of immunological procedures. The study of the immune systems of the body. Antigen-antibody studies and techniques.

MT 4411 Clinical Serology Lab (1)
In this lab, the student becomes proficient in running and interpreting serology (immunology) tests.

MT 4412 Clinical Chemistry (6)
This lecture course focuses on the principles and interpretations of biochemical analytical methods, clinical calculations, and quality control.

MT 4413 Clinical Chemistry Lab (4)
This lab rotation provides the practical experience of running biochemical tests and interpreting their results. Some prior experience with instrumentation is required in order to understand how to use and care for clinical instruments.

MATHEMATICS COURSES (MTH)

MTH 0096 Pre-Algebra (3)
Topics include operations with whole numbers, decimals, and fractions. Ratio, percent and equation solving will be emphasized. *Note: This course is for institutional credit only and will not be used in meeting degree requirements. This course will not substitute for any general studies requirement.*

MTH 1100 Fundamentals of Algebra (3)
Topics include integer and rational arithmetic, linear equations, inequalities, integer exponents, polynomials and factoring, rational expression. *Prerequisite: Placement or a grade of C or better in MTH 0096. Note: This course is for institutional credit only and will not be used in meeting degree requirements. This course will not substitute for any general studies requirement.*

MTH 1105 Intermediate Algebra (3)
Topics include real and complex numbers; polynomials and factoring; rational exponents; roots and radicals; linear equations and inequalities; quadratic equations; and graphing. *Prerequisite: Placement or a grade of C or better in MTH 1100. Note: This course is for institutional credit only and will not be used in meeting degree requirements. This course will not substitute for any general studies requirement.*

MTH 1110 Finite Mathematics (3)
Topics include a survey of logic, sets, counting, permutations, combinations, basic probability, an introduction to statistics, and matrices and their applications to Markov chains and decision theory. *Prerequisite: Appropriate score on mathematics placement test, advanced placement, or a grade of C or better in MTH 1105. Note: Credit will not count toward a major or minor in mathematics.*

MTH 1112 Pre-Calculus Algebra (3)
Topics include the algebra of functions, including polynomial, rational, exponential, and logarithmic functions. The course also contains systems of equations and inequalities, linear and quadratic equations and inequalities, graphs of polynomials, and the binomial theorem. *Prerequisite: Appropriate score on mathematics placement test, advanced*

placement, or a grade of C or better in MTH 1105. Note: Credit will not count toward a major or minor in mathematics.

MTH 1114 Pre-Calculus Trigonometry (3)
This course covers trigonometric functions including definitions, identities, and trigonometric equations, applications as well as properties and graphs of trigonometric functions and their inverses. Also included are the law of sines, the law of cosines, polar coordinates, vectors, and conic sections. *Prerequisite: MTH 1112 with a grade of C or better or advanced placement. Note: Credit will not count toward a major or minor in mathematics.*

MTH 1115 Pre-Calculus Algebra and Trigonometry (4)
The course covers the algebra of functions, systems of equations and inequalities, quadratic inequalities, and the conic sections. It also includes the study of trigonometric and inverse trigonometric functions, trigonometric equations, vectors, complex numbers, polar coordinates, and DeMoivre's Theorem. *Prerequisite: MTH 1105 with a grade of C or better, appropriate score on the mathematics placement test, or advanced placement. Note: Credit will not count toward a major or minor in mathematics.*

MTH 1125 Calculus I (4)
Topics include limits of functions, derivatives of algebraic, trigonometric, exponential and logarithmic functions and their inverses and the definite integral and its application to area problems. Applications of the derivative are covered in detail including approximations of error using differentials, maximum and minimum problems, and curve sketching using calculus. *Prerequisite: A grade of C or better in MTH 1114 or 1115, or advanced placement.*

MTH 1126 Calculus II (4)
Topics include vectors in the plane and in space, lines and planes in space, applications of integration (such as volume, arc length, work, and average value), techniques of integration, indeterminate forms, infinite series, polar coordinates, and parametric equations. *Prerequisite: MTH 1125 or advanced placement.*

MTH 2201 Business Calculus (3)
An introduction to the basic ideas and techniques of differential and integral calculus, especially as they relate to problems involving maximum and minimum values of functions and marginal analysis. *Prerequisite: MTH 1112 or 1115 with a grade of C or better, or advanced placement. Note: Credit will not count toward a major or minor in mathematics.*

MTH 2210 Applied Statistics (3)
Applications of statistical techniques, such as experimental design, hypothesis testing, parametric and non-parametric tests along with descriptive statistics in contemporary research. This course will focus on the commonly used parametric statistical tests, their non-parametric counterparts, and the conditions under which each test is appropriate or inappropriate. *Prerequisite: A grade of C or better in MTH 1112. Note: Credit will not count toward a major or minor in mathematics.*

MTH 2215 Applied Discrete Mathematics (3)
Discrete mathematics with a computer science orientation is presented. Topics include sets, relations, logic, algorithms, and recursion. *Prerequisite: A grade of C or better in MTH 1112. Note: Credit will not count toward a major or minor in mathematics.*

MTH 2220 Computer Programming for Mathematics (3)
Structured programming of a mathematical nature, arithmetic computations, algorithm design and control structures, functions and subroutines, intrinsic functions, array processing. *Prerequisite: MTH 1125.*

MTH 2227 Calculus III (4)
Topics include vector functions, multi-variable functions, partial derivatives and their applications, quadric surfaces, multiple integrals, and vector calculus, including Green's theorem, curl, divergence, surface integrals, and Stoke's theorem. *Prerequisite: MTH 1126 or advanced placement.*

MTH 2251 Mathematical Concepts for K-6 Teachers I (3)
An examination of some of the major topics encountered in the teaching of elementary mathematics with emphasis on number theory, order of operations, definitions of and operations with rational and irrational numbers, estimation, definitions and algorithms of the four operations, numeration systems, bases other than ten, and problem solving. *Prerequisite: MTH 1110 or 1112. Note: Credit will not count toward any major or minor in mathematics.*

MTH 2252 Mathematical Concepts for K-6 Teachers II (3)
An examination of some of the major topics encountered in the teaching of elementary school geometry with emphasis on measurement, area, volume, congruence, polygons, circles, constructions, motion geometry, polyhedra, and similarity. *Prerequisite: MTH 1110 or 1112. Note: Credit will not count toward any major or minor in mathematics.*

MTH 3300 Selected Topics (3)
Examination of a designated topic of special and/or current interest and importance, which is generally not covered in regularly offered courses in the mathematics curriculum.

MTH 3311 Differential Equations (3)
An introduction to ordinary differential equations. Topics include first order methods, linear equations, the Laplace transforms, systems of equations, and applications. *Prerequisite: MTH 2227.*

MTH 3318 Introduction to Advanced Mathematics (3)
Topics include set theory, equivalence relations and partitions, logic, number systems, functions, and proof writing techniques. *Prerequisite: MTH 1126 or permission of instructor.*

MTH 3325 College Geometry (3)
Axiomatic systems; incidence and separation properties of planes and space; metric and synthetic approaches; geometric inequalities; parallel postulate; area-theory; circles in a plane; models for hyperbolic and elliptic geometries; and constructions with a straightedge and compass. *Prerequisite: MTH 3318 or permission of instructor.*

MTH 3331 Linear Algebra (3)
Matrices, systems of equations, determinants, eigenvalues and eigenvectors. *Prerequisite: MTH 1126 or permission of instructor.*

MTH 3364 Vector Calculus (3)
Differentiation in several variables. Line and surface integrals. Potential theory and differential forms. *Prerequisite: MTH 2227.*

MTH 4412 Discrete Mathematics (3)
Topics can include counting, graph theory, partitions, principle of inclusion and exclusion, finite geometries, applications of group theory, recurrence relations, generating functions. *Prerequisites: MTH 2227 and 3318.*

MTH 4420 Introduction to Algorithmic Graph Theory (3)
The elements of the theory and algorithms of graphs and hypergraphs with motivating examples from computer science, networking, scheduling, biology, etc.; algorithms, complexity, data structures, shortest paths, spanning trees, depth-first search, planar graphs, coloring of graphs and hypergraphs. *Prerequisites: MTH 3331, computer programming course, or permission of instructor.*

MTH 4422 Numerical Analysis (3)
Topics include finite differences, interpolation, numerical integration and differentiation, solutions of equations of one variable, linear systems, and numerical solutions of ordinary differential equations. *Prerequisites: MTH 2220, 2227 and 3331, or permission of instructor.*

MTH 4424 Real Analysis I (3)
The real number system, completeness, limits, continuity, sequences, differentiation, and the Riemann integral. *Prerequisites: MTH 2227 and 3318.*

MTH 4425 Real Analysis II (3)
Sequences and series of functions, series, and a continuation of the integral to include the Fundamental Theorem of Calculus. *Prerequisite: MTH 4424.*

MTH 4426 Complex Analysis (3)
Complex numbers, elementary functions and their mappings, complex limits and power series, analytic functions, integrals, contour integrals, and Cauchy integral formula. *Prerequisites: MTH 2227 and 3318 or permission of instructor.*

MTH 4436 Number Theory (3)
Divisibility, congruencies, prime numbers, Fermat's theorem, Diophantine equations, number theoretic functions. *Prerequisites: MTH 2227 and 3318.*

MTH 4441 Abstract Algebra I (3)
Properties of the integers, modular arithmetic. Elementary theory of groups, finite groups, subgroups, cyclic groups, permutation groups. Group isomorphisms and homomorphisms. *Prerequisites: MTH 2227, 3318, and 3331, or permission of instructor.*

MTH 4442 Abstract Algebra II (3)
Elementary theory of rings, polynomial rings, divisibility, unique factorization domains. Integral domains, ideals, factor rings, divisibility in integral domains. Elementary theory of fields. Extension fields. *Prerequisite: MTH 4441.*

MTH 4451 Mathematical Statistics I (3)
Probability theory, sample spaces, random variables, mutual exclusion, independence, conditional probability, permutations and combinations, common discrete and continuous distributions, expected value, mean, variance, multivariate distributions, covariance, Central Limit Theorem. *Prerequisite: MTH 2227 or permission of instructor.*

MTH 4452 Mathematical Statistics II (3)
Fundamentals of the theory of statistics, the Central Limit Theorem, point estimation, sufficiency, consistency, hypothesis testing, sampling distributions, confidence intervals, linear regression models, interpretation of experimental results, Bayesian Estimation. *Prerequisite: MTH 4451.*

MTH 4460 Topology (3)
An introduction to metric and topological spaces and associated topics, separation axioms, compactness, and connectedness. *Prerequisites: MTH 2227 and 3318.*

MTH 4474 Internship in Mathematics Education (9)
The Professional Internship Program is the culminating clinical field-based experience for students seeking certification in a teaching field. The Professional Internship Program provides the student with the opportunity to conduct classes and assume the role of a teacher while receiving supervision from a classroom teacher and a university supervisor for a period of one full semester. The student will demonstrate skills of the informed, reflective decision maker throughout the internship experience. *Prerequisite: Admission to TEP. Corequisite: SED 4454.*

MTH 4481 Methods and Materials for the Secondary Teacher (3)
A survey of teaching methods and materials appropriate for teaching in the content areas for grades 6-12. Topics addressed will include teacher evaluation in the public schools, collaboration with special education teachers, and lesson planning formats. In addition, teaching methods, selections

organization and use of mathematics materials for grades 6-12 will be covered in detail. A professional laboratory experience is included in this course. *Prerequisite: Admission to TEP.*

MTH 4490 Senior Seminar (1-3 hours variable credit)
Individualized study of a topic in mathematics culminating in a written and oral presentation. *Prerequisites: MTH 3318 and senior status.*

MTH 4491/4492 Guided Independent Research (3)
Additional information is indexed under Guided Independent Research and Study.

MTH 4493-4494 Guided Independent Study (3)
Additional information is indexed under Guided Independent Research and Study.

MUSIC INDUSTRY COURSES (MUI)

MUI 3305 Music Technologies (3-3)
Study of the applications of the microcomputer to music teaching and to the management, planning, and record-keeping tasks of the music educator. *Prerequisite: MUS 2230*

MUI 3310 Audio Principles and Techniques (3)
A basic course to develop the understanding and skills to make audio recordings. Listening skills will be emphasized along with editing and recording assignments. *Prerequisite: MUS 3305.*

MUI 3315 Song Writing (2)
Study of basic skills and techniques of songwriting including melodic construction, harmonic progression, and lyric writing and revisions. *Prerequisites: MUS 1102, 1103, 2230, 3305.*

MUI 3320 Grant Writing/Funding for the Musical Arts (2)
Identifying funding sources and creating effective grant proposals for music production and related activities.

MUI 3325 Recording Studio I (2)
An examination of the art of studio recording. The mixing console, microphones, sound effects, and digital and analog recording devices will be studied.

MUI 3326 Recording Studio II (2)
In-depth study of audio recording. Remote and studio recording techniques, sound reinforcement, and post production will be covered. Students will prepare a recording project portfolio.

MUI 3330 Selling Music (2)
Exploration of the music sales process and development of a sales plan. Ways of growing the customer base, promoting the product, dealing with competition, and adapting to e-commerce are examined.

MUI 3335 Retailing (2)
Introduction to basic principles of music retailing, contemporary issues as well as the history of corporate changes in the music industry, will be discussed.

MUI 4410 Arts Management/Concert Production (2)
Study of the arts organization and the performing artist within a social and governmental context. *Prerequisites: MUS 2230, 3305.*

MUI 4420 Film Scoring (2)
Examination of the process and preparation of digital music for film, digital video and animation. *Prerequisite: MUI 3310.*

MUI 4430 Marketing of Recorded Music (2)
Examination of the process of studio production, manufacturing, promotion and distribution of contemporary recordings. Record release programs for independent and major label-controlled products are analyzed. *Prerequisites: MUS 2230, 3305.*

MUI 4435 Music Merchandising (2)
Examination of the production, marketing, merchandising and distribution of musical products in the current music marketplace. *Prerequisites: MUS 2230, 3305.*

MUI 4440 Audio Principles and Techniques II (3)
This course is an in-depth examination of audio recording. The curriculum will cover remote and studio recording techniques. The related areas of sound reinforcement and post-production will be covered at length. Students will apply advanced microphone techniques, utilize digital editing and plug-ins, and prepare a recording project portfolio. *Prerequisite: MUI 3310.*

MUI 4460 Senior Practicum (3)
Culminating project and presentation in student's area of emphasis integrating internship, career placement and portfolio development *Prerequisite: Approval of adviser / coordinator.*

MUI 4480 Seminar in Music Industry (1)
Study of a special topic in the music profession. Contact school of music office for specific information about content schedule and costs in any given term.

MUI 4499 Music Industry Internship (9)
Placement in real-world work environment in the music industry. Supervised by a music industry faculty member. *Prerequisite: MUS 4460.*

MUSIC COURSES (MUS)

NOTE: A passing score on the theory placement test prior to registration is required of all students taking music theory coursework (except for MUS 1100 - Basic Music Skills). Contact the School of Music for more information.

MUS 1100 Basic Music Skills (2-3)
Focuses on the elements of music with emphasis on basic skills of music reading, orientation to the keyboard, sight-singing and dictation. *NOTE: This course cannot be used in meeting degree requirements other than general electives. May not be taken concurrently with any other music theory course.*

MUS 1102 Music Theory I (3-3)
Study of fundamental characteristics of tonal music. *Prerequisite: Grade of C in MUS 1100 or acceptable score on placement test. Students must take placement test before enrolling in this sequence. Co-requisites for music majors: MUS 1105 and 1107.*

MUS 1103 Music Theory II (3-3)
Study of modulation, secondary dominants, seventh chord resolution, two- and three-part forms, and intermediate-level analysis. *Prerequisite: MUS 1102. Co-requisites for music majors: MUS 1106 and 1108.*

MUS 1105 Class Piano I (1-2)
Introduction to basic keyboard musicianship and music reading skills. Focuses on beginning improvisation techniques, harmonization and beginning chorale playing.

MUS 1106 Class Piano II (1-2)
Development of intermediate-level keyboard skills including improvisational techniques, chorale playing, sight reading and transposition. *Prerequisite: MUS 1105.*

MUS 1107 Aural Skills I (1-2)
Beginning sight singing and rhythmic reading. Melodic, harmonic and rhythmic dictation, including intervals, chord qualities and simple/compound meters. Beginning improvisation techniques.

MUS 1108 Aural Skills II (1-2)
Intermediate level sight singing and rhythmic reading. Combined melodic and harmonic dictation, with inversions and mixed meter rhythms. Continuation of improvisation techniques. *Prerequisite: MUS 1107.*

MUS 1110-4428 Private Instruction (1 credit hour per semester, 1 lesson per week)

1110/2210/3310/4410	Violin
1111/2211/3311/4411	Viola
1112/2212/3312/4412	Cello
1113/2213/3313/4413	String Bass
1114/2214/3314/4414	Piano
1115/2215/3315/4415	Organ
1116/2216/3316/4416	Voice
1117/2217/3317/4417	Clarinet
1118/2218/3318/4418	Oboe
1119/2219/3319/4419	Flute
1120/2220/3320/4420	Bassoon
1121/2221/3321/4421	Saxophone
1122/2222/3322/4422	Trumpet
1123/2223/3323/4423	Horn
1124/2224/3324/4424	Trombone
1125/2225/3325/4425	Euphonium
1126/2226/3326/4426	Tuba
1127/2227/3327/4427	Percussion
1128/2228/3328/4428	Guitar

1000-level courses are for non-majors and music majors studying secondary instruments. Prospective music and music education majors will be auditioned by a music faculty member to determine readiness for study as a major. Students will study two semesters each at the 2000, 3000, and 4000 levels. Approval for advancement will be given at jury examinations by faculty in each area (keyboard, voice, brass, woodwinds, percussion).

MUS 1131 Music Appreciation (2-2)
Orientation, vocal and instrumental media, forms, historical development and guided listening. Credit for this course does not apply toward any program in music.

MUS 1132 Honors Music Appreciation (2-2)
Elements of music, composers, vocabulary for music, forms and music literature. Includes a writing project on a musical topic. *Prerequisite: ACT score of 25 or permission of instructor.*

MUS 1181 Band (1-6) Fall; (1-3) Spring and Summer
Marching Band (fall) and concert band (spring and summer). Open to all students by permission of director.

MUS 1182 Choir (1-3)
Choral ensemble; open to all students by permission of director.

MUS 1183 Collegiate Singers (1-3)
Choral group devoted to performance of choral masterworks. *Prerequisite: Open to all students with permission of instructor.*

MUS 1191 Musical Theatre (1-3)
Production of fully-staged works for musical theatre. Offers experiences on-stage, back-stage, and in the orchestra pit. Open to all students by permission of director.

MUS 1192 Madrigal Singers (1-3)
Performance of choral chamber music in a variety of styles, including Renaissance, 20th Century, jazz and pop. *Prerequisite: Audition required.*

MUS 2202 Music Theory III (3-3)
Principles of l6th century counterpoint and analysis of through-composed forms. *Prerequisite: MUS 1103. Co-requisite for music majors: MUS 2207.*

MUS 2203 Music Theory IV (3-3)
Compositional techniques and analysis of later romantic period works. Introduction to 20th century composition and analysis. *Prerequisite: MUS 2202.*

MUS 2207 Aural Skills III (1-2)
Advanced sight singing and rhythmic reading. Contrapuntal dictation and transcription projects. Continuation of improvisation techniques. *Prerequisite: MUS 1108.*

MUS 2230 Survey of Music Industry
An introduction to practices and inter-relationships of the music industry, such as retail, recording, distribution, legal aspects, publishing media and employment.

MUS 2240 World Music Cultures (2)
A survey of diverse musical traditions from around the globe. Musical cultures are approached anthropologically, and each culture will be examined to understand how music is entwined with human experience.

MUS 2245 Modern Popular Musics (2)
This course surveys the development of popular music in America and abroad. The course develops competency in the elements and history of music as well as the ability to critically analyze popular music trends.

MUS 3300 History of Jazz (2-2)
History of jazz and pop styles from 1900 to the present. Analysis of harmonic principles and common practices of each major period.

MUS 3305 Music Technologies (3-3)
Study of the applications of the microcomputer to music teaching and to the management, planning, and record-keeping tasks of the music educator.

MUS 3306 Conducting (3-3)
Basic conducting techniques for instrumental and choral groups. Includes score study, rehearsal techniques and interpretation of various styles. *Prerequisite: MUS 1103.*

MUS 3330 Survey of Western Music History I (3)
This course traces the development of Western music from the ancient and medieval worlds through the Renaissance and baroque periods.

MUS 3331 Survey of Western Music History II (3)
This course traces the development of Western music from the 18th century through the classical, romantic and contemporary periods.

MUS 3340 Diction for Singers (1)
Focuses on student understanding and application of singing of the English, Italian, Latin, German and French languages through use of the International Phonetic Alphabet and appropriate art song repertoire. *Prerequisites: ENG 1102, MUS 2216.*

MUS 3341 Vocal Pedagogy (1)
A study of vocal teaching methods with an emphasis on application for private voice and choral teachers. This course also includes a review of vocal/choral pedagogical literature. *Prerequisite: MUS 2216.*

MUS 3346 Educational Assessment in Fine Arts (3-3)
This course provides a broad foundation in all aspects of assessment as it is applied to the P-12 music and art classroom, from learning theory to practical application of assessment techniques, data management, critical thinking, progress reporting and portfolio building. Assessment task design in the artistic response modes is covered, and a series of assessments that can be implemented in the music/art classroom are developed. *Prerequisite: Admission to TEP.*

MUS 3350 Wood and Percussion Methods (1)
Students will demonstrate theoretical, pedagogical and performance knowledge of/on selected wind/percussion instruments and awareness of instrument materials and rehearsal techniques, and will review the role of the instrumental music educator in music education.

MUS 3351 Class Brass (1-2)
Group instruction in techniques of playing and teaching brass instruments.

MUS 3352 Class Woodwinds (1-2)
Introduction to each of the principal woodwind instruments, emphasizing teaching techniques suitable for band classes.

MUS 3353 Class Percussion (1-2)
Group instruction in playing and teaching the principal pitched and non-pitched percussion instruments.

MUS 3354 Class Strings (1-2)
Group instruction in techniques of playing and teaching stringed instruments.

MUS 3356 Class Voice (1-2)
Introduction to the use of the singing voice for non-voice principals in music education.

MUS 3358 Beginning Folk Guitar (1-2)
Basic introduction to guitar chording and accompanying songs in the classroom or in informal settings.

MUS 3361 Integrating Music into the Curriculum (3-3)
Basic skills and methods of presentation and evaluation for music in grades P-6. Role-playing experiences are used to demonstrate appropriate materials, student involvement and motivational techniques. *Prerequisite: MUS 1131 or 1132.*

MUS 3364 String Orchestra (1-2)
String ensemble open to all students with permission of director.

MUS 3365 Class Composition (1-3)
Creative musical writing, criticism, and study of compositional techniques. *Prerequisite: Permission of instructor.*

MUS 3382 Choral Techniques (3-3)
Organizational and instructional strategies for teaching music through performance in choir. Includes a field component. *Prerequisite: MUS 1103 and junior standing.*

MUS 3384 Band Techniques (3-3)
Organizational and instrumental strategies for teaching music through performance in band. Includes a field experience component. *Prerequisite: MUS 1103 and junior standing.*

MUS 3385 Symphony Band (1-3)
Selective concert organization for performance of advanced literature for band and wind ensemble. *Prerequisite: Audition with director.*

MUS 3386 Jazz Ensembles (1-3)
Selective ensemble for performance in a wide variety of jazz styles. *Prerequisite: Audition with director.*

MUS 4400, 4401, 4402 Selected Topics (1-3 credit hours per course)
Detailed investigation of a specialized topic not covered in regularly offered courses, or an advanced section for intensive study.

MUS 4403 Classroom Management for the Music Educator (3-4)
The purpose of this course is to establish a foundation of content and application relative to classroom management for the music educator (P-12). Provides opportunities for analysis and application of behavioral management techniques in general music and performance-based pedagogical settings.

MUS 4431 Trumpet Ensemble (1)
Ensemble course open to all students.

MUS 4432 Percussion Ensemble (1)
Ensemble course open to all students.

MUS 4433 Clarinet Choir (1)
Ensemble course open to all students.

MUS 4434 Show Choir (1)
Ensemble course open to all students.

MUS 4435 Campus Concert Band (1)
Ensemble course open to all students.

MUS 4436 Vocal Jazz Ensemble (1)
Select choral group (auditioned from members of the auditioned Concert Chorale) devoted to performance of contemporary acapella choral pieces (focusing on the mid 20th – early 21st century) with an emphasis on highly stylized and advanced vocal jazz. Limited to 12 members (three per voice part.) *Prerequisites: audition, sophomore status or above.*

MUS 4440 Marching Band Techniques (3)
This course is designed to provide students with tools and techniques to successfully administer a high school marching band program, select and rehearse music, write and rehearse drill, and examine various marching techniques. Also included are intensive work with the Pyware Drill Design software and experiences with writing drill and creating working frameworks for marching bands.

MUS 4445 Modern Popular Music (2)
This course surveys the development of popular music in America and abroad, with emphasis on processes in popular music as an important element of culture, examining both the music and the cultural, social, economic, technological, and political conditions surrounding the music. The objective of this course is to develop competency in the elements of music and the history of its popular form in order to critically analyze current popular music trends.

MUS 4451 Literature and Techniques of Musical Theatre (3-3)
A survey of production techniques appropriate for school and college productions of operas and/or musicals.

MUS 4452 Opera Literature (3-3)
Historical survey of major operas from all periods designed to increase appreciation and understanding of this dramatic art form.

MUS 4455 Survey of the Broadway Musical (3-3)
Traces the origins and surveys major works of the Broadway musical repertoire.

MUS 4460 Music for the Exceptional Learner (3-3)
Theoretical and practical exploration of the use of music to teach various populations of exceptional learners. Hands-on experience provided with ex-

ceptional populations and designing musical activities for each. *Prerequisite: sophomore standing.*

MUS 4461 Orchestration and Arranging (2-2)
Ranges, transpositions and other characteristics of standard instruments and voices. Arranging projects geared to needs of school instrumental and choral groups. *Prerequisite: MUS 2202.*

MUS 4470 Instrument Repair (2-2)
Course includes basic musical instrument adjustment, maintenance and repair, common industry standards and guidelines, practical evaluation and hands-on adjustment and repair.

MUS 4471 Music for ECE and Elementary School (3-4)
Materials and planning techniques for music in grades P-6. Singing, listening, movement, instrument playing and creative activities will be explored. Multicultural elements, observation, teaching experiences, and practical application of ideas will be included. *Prerequisites: MUS 1103 and junior standing.*

MUS 4472 Internship in Music Education (9)
The Professional Internship Program is the culminating clinical field-based experience for students seeking certification in a teaching field. The Professional Internship Program provides the student with the opportunity to conduct classes and assume the role of a teacher while receiving supervision from a classroom teacher and a university supervisor for a period of one full semester. The student will demonstrate skills of the informed, reflective decision maker throughout the internship experience. *Prerequisite: Admission to TEP. Corequisite: IED 4454.*

MUS 4481 Methods and Materials for the Secondary Music Teacher (3-4)
Teaching methods, selection, organization and use of music materials in grades 6-12. Observation and teaching experiences will be included. *Prerequisites: MUS 4471 and admission to TEP.*

MUS 4491-4492 Guided Independent Research (1-3 credit hours per course)
Additional information may be found under Independent Research and Study.

MUS 4493-4494 Guided Independent Study (1-3 credit hours per course)
Additional information may be found under Independent Research and Study.

MUS 4499 Senior Recital (1-1)
Public performances of the senior recital. Required for all music education majors.

NURSING COURSES (NSG)

(ASN Program)

NSG 1131 Basic Nursing Concepts Practicum (4-8)
Introduces the nursing process as a systematic approach to health promotion and maintenance. Includes the concept of human environment interaction throughout the lifespan, history of nursing, and concepts of healthcare delivery. Requires basic understanding of medical terminology. Focuses on the role of the registered nurse in the application of basic concepts, skills and techniques in simulated and reality settings. *Prerequisites: Admission to the ASN Program, ENG 1101, MTH 1112, PSY 2200, BIO 3347, L347. Prerequisites or co-requisites: NSG 1135, BIO 3348, L348.*

NSG 1135 Health Assessment Practicum (1-2)
Focuses on the assessment phase of the nursing process as a means of collecting data for use by the registered nurse. Accentuates gathering of knowledge and skills required to perform health assessments of patients through the life span. Provides opportunities for students to develop health assessment skills by performing health assessments of essentially well individuals at various levels through the life span. Includes communication of findings. *Prerequisites: Admission to the ASN Program, ENG 1101, BIO 3347, L347, MTH 1112, PSY 2200. Prerequisite or corequisites: BIO 3348, L348.*

NSG 1140 Basic Nursing Concepts II (3-3)
Builds on the concept of human-environment interaction throughout the life span. Focuses on the use of the nursing process to explore adaptive strategies of individuals to common and altered health states. *Prerequisites: NSG 1130, 1131, 1135, 1151, 2213, BIO 3348, L348, PSY 2210, and TROY 1101. Corequisites: NSG 1141.*

NSG 1141 Basic Nursing Practicum II (3-6)
Focuses on the role of the registered nurse in application of the nursing process to assist individuals in adapting to common and altered health states. *Prerequisites: NSG 1130, 1131, 1151, 1135, 2213, BIO 3348, L348, PSY 3300 and TROY 1101. Corequisites: NSG 1140.*

NSG 1151 Hospital Measurements (1-1)
A practical approach to using mathematical computations in health-related situations. Focuses on mathematics computations as applied in selected health care settings. Mastery of the use of different systems of measurement will be a priority. Includes an exam on computation of dosages and solutions, requiring completion with 85% accuracy. *Prerequisites: Admission to the ASN Program, ENG 1101, MTH 1112, PSY 2200, BIO 3347, L347.*

NSG 2202 Pharmacology (2-2)
Focuses on the general classification of drugs, pharmacological actions, clinical usage, methods of administration, usual dosage, side effects, contraindications, toxic reactions, and related nursing impli-

cations. *Prerequisites: NSG 1140, NSG 1141, and BIO 3372, L372.*

NSG 2213 Nutrition (2-2)
Introduces the concept of nutrition and its importance to health throughout the life span. Focuses on the study of the nutrients, nutritional assessment, nutrient-drug interactions and food safety. Considers dietary patterns of various cultural, ethnic and religious groups.

NSG 2255 Maternal-Infant Nursing (2-2)
Focuses on the use of the nursing process in assisting the family during childbearing experiences. Explores adaptive strategies for individuals experiencing alteration in health states. *Prerequisites: NSG 1140, 1141, 2271, 2272. BIO 3372, L372. Corequisite: NSG 2256.*

NSG 2256 Maternal-Infant Nursing Practicum (2-4)
Focuses on the role of the registered nurse in the application of the nursing process to assist individuals and families to use adaptive strategies during childbearing. Utilizes antepartal, intrapartal, postpartal, neonatal, and community settings. Includes a basic IV therapy component. *Prerequisites: NSG 1140, NSG 1141, NSG 2271, NSG 2272, BIO 3372, L372. Co-requisite: NSG 2255.*

NSG 2265 Nursing of Children (2-2)
Focuses on the use of the nursing process in assisting the family during childrearing experiences. Explores adaptive strategies for individuals experiencing alteration in growth and development and health states. *Prerequisites: NSG 1140, 1141, 2271, 2272. BIO 3372, L372. Corequisite: NSG 2266.*

NSG 2266 Nursing of Children Practicum (2-4)
Focuses on the role of the registered nurse in the application of the nursing process to assist children and their families to use adaptive strategies during childrearing. Applies concepts of growth and development in the care of children with altered health states including multiple disabilities. *Prerequisites: NSG 1140, NSG 1141, NSG 2271, NSG 2272, BIO 3372, L372. Co-requisite: NSG 2265.*

NSG 2271 Psychosocial Nursing Concepts (2-2)
Focuses on the role of the registered nurse in promoting the adaptation of individuals and families experiencing biopsychosocial stressors. *Prerequisites: NSG 1130, 1131, 1135, 1151, 2213, BIO 3348, L348, PSY 2210, TROY 1101. Co-requisites: NSG 2272.*

NSG 2272 Psychosocial Nursing Practicum (2-4)
Focuses on the role of the registered nurse in the application of the nursing process in the care of individuals and families experiencing biopsychosocial stressors. *Prerequisites: NSG 1131, 1135, 1151, 2213, BIO 3348, L348, PSY 2210, TROY 1101. Co-requisites: NSG 2271.*

NSG 2280 Advanced Nursing Concepts (4-4)
Provides advanced knowledge for care of individuals and families in adult developmental stages. Focuses on the role of the nurse in assisting the client to adapt to complex, multi-system stressors within the environment. *Prerequisites: NSG 2202, 2253, 2255, 2256, 2265, 2266, 2282, 2283. Co-requisite: NSG 2281.*

NSG 2281 Advanced Nursing Practicum (6-12)
Provides opportunity to implement the nursing process to assist adult individuals and families with complex multi-system stressors. Emphasizes prevention and intervention in complex and life-threatening situations. Facilitates transition into the professional nursing role by examining legal, ethical, political, economic, and socio-cultural issues in nursing. Provides opportunity to refine nursing skills and develop more in-depth knowledge in a selected clinical area under the guidance of an approved professional nurse. *Prerequisites: NSG 2202, 2253, 2255, 2256, 2265, 2266, 2282, 2283. Co-requisite: NSG 2280.*

NSG 2282 Gerontological Nursing Concepts (2-2)
Focuses on the adaptive responses of older adults with multi-system stressors within the human environment interactive system. Emphasizes the interrelatedness of internal and external dimensions. Discusses the use of the nursing process to maintain or improve quality of life for older adults. *Prerequisites: NSG 1140, NSG 1141, NSG 2271, NSG 2272, BIO 3372, L372. Co-requisite: NSG 2283.*

NSG 2283 Gerontological Nursing Practicum (2-4)
Focuses on the role of the registered nurse in the application of the nursing process to assist older adults with multi-system stressors in a variety of settings. *Prerequisites: NSG 1140, NSG 1141, NSG 2271, NSG 2272, BIO 3372, L372. Co-requisite: NSG 2282.*

(BSN Program)

NSG 1101 Health Concepts (1)
Provides opportunity for exploration of individual health values, beliefs, and behaviors. Examines impact of exercise, nutrition, and stress on health. Explores beliefs of time management, relaxation, and play in promoting and maintaining health. Open to all majors.

NSG 1105 Medical Terminology (1)
Develops the use of Latin and Greek prefixes, root words, and suffixes to understand medical terminology. Open to all majors.

NSG 1150 First Responder (1-2)
Provides the learner with cognitive and psychomotor skills to act in emergency situations. Topics include CPR, patient head-to-toe evaluation, bleeding and shock, internal and external body injuries, splinting, poisons, bites, burns, and drownings. May audit for recertification. Open to all majors.

NSG 1160 Introduction to Technology in Nursing Education (1)
Provides a foundation for using computer technology in nursing education. Addresses digital communication, resources, and research used in learning. Includes communication through electronic mail and course discussion using the World Wide Web as an information tool, online scholarly research, and digital presentations. Open to all majors.

NSG 2201 Dosage Calculations (1)
Uses mathematical principles, symbols, conversions and computations for accurate calculation of dosages for safe and effective medication administration for patients of all ages. Explores current evidence and health care policy related to safe and effective medication administration. *Prerequisite: Admission to BSN program.*

NSG 2204 Nutrition (2)
A study of macro and micronutrients, their metabolism in the body, and their influence on health states of individuals from diverse cultural, ethnic and religious groups of all ages. Examines nutritional research and health policy. Compares nutritional adequacy to evidence-based national standards. Open to all majors.

NSG 2205 Human Growth and Development (3)
Examines developmental theories and internal and external dimensions of growth and development. Emphasizes tasks, stressors, common health alterations, and anticipatory guidance specific to developmental stages throughout the life span. Open to all majors.

NSG 2211 Human Nutrition (3)
Explores the relationship between nutrition and health. Emphasizes the roles of nutrients, their utilization in the human system and their contributions to the health of individuals of all ages. Includes dietary patterns of various cultural, ethnic and religious groups, nutritional assessments, and food safety. Open to all majors.

NSG 2220 Health Science Informatics (3)
Provides a foundation for the study of information and its utilization through computer technology; encompasses access, dissemination, and management of health science information and Internet communication. General topics include communication through electronic mail, using the World Wide Web as an information tool, online scholarly research, and digital presentations and publishing. Course focus is the application of technology skills in health science fields. Open to all majors. *Prerequisite: Sophomore standing.*

NSG 2240 Spanish for Healthcare Providers (2)
Elementary-level instruction in Spanish language and culture, all oriented to the practice of medicine with Spanish-speaking patients. No prior knowledge of Spanish is required. Students develop basic listening, speaking, reading and writing skills to successfully perform linguistic tasks allowing them to communicate in everyday situations (e.g. greeting, narrating present and past events, describing, ordering, comparing and contrasting). *Prerequisite: Permission of instructor.*

NSG 2285 Perspectives of Aging (2)
Presents interrelationships among physical, psychosocial, cultural, and spiritual components related to the older adult. Identifies senescence and alterations associated with the aging process in response to internal and external environmental dimensions. Open to all majors.

NSG 2290 Nursing in the Global Community (1)
Explores issues, philosophies and cultural differences in nursing in the global community. Compares nursing and health care in the United States to that of other nations. *Prerequisite: sophomore standing or permission of instructor.*

NSG 2291 Nursing Study Abroad (2)
Provides the opportunity for students to experience nursing in the global community through a cultural immersion in a study abroad program. Focuses on the comparison of nursing in the United States to nursing in the international community.

NSG 3301 Pharmacology (3)
Focuses on key pharmacological principles and the role of the nurse in management of drug therapy, including appropriate evidence-based patient teaching, counseling, and safety and quality controls. Presents drug classifications and related nursing implications for individuals of all ages. *Prerequisite: Admission to the BSN program or permission of instructor.*

NSG 3302 Essentials of Operating Room (OR) Nursing (1)
Focuses on the functions of the registered nurse in the peri-operative setting. *Prerequisites: NSG 3325, 3326.*

NSG 3303 Essentials of Operating Room (OR) Nursing Practicum (1-2)
Focuses on clinical experience for preparation for the role of the registered nurse for meeting the emergency preventive and restorative health needs of patients in hospital operating rooms and outpatient surgery centers. *Prerequisites: NSG 3325, 3326.*

NSG 3306 Perspectives of Professional Nursing (2)
Explores the roles of the baccalaureate degree nurse. Presents the principles, standards, and values implicit in the profession of nursing. Introduces the theories used in the definition of concepts of humanity, environment, health, and nursing. Introduces the development of key elements used in professional nursing practice: caring, evidence-based clinical decisions, communication, collaboration, cultural humility, ethical competence, research, and information technology. Explores the influence of internal and external dimensions on professional nursing practice. *Prerequisite: Admission to the BSN Program.*

NSG 3309 Health Assessment (2)
Focuses on the assessment phase of the nursing process as a means of collecting data for use in making clinical decisions for the promotion of safe, quality care. Emphasizes acquisition of knowledge and skills required to perform health assessments focusing on physical, psychosocial, cultural, and spiritual components of individuals at various ages and communication of findings. *Prerequisites: BIO 3347, L347, 3348, L348. Corequisite: NSG 3310.*

NSG 3310 Health Assessment Practicum (1-2)
Provides opportunities for students to practice health assessment skills required for culturally diverse individuals of all ages. Includes analysis and communication of findings for the promotion of safe, quality care. Requires demonstration of effective communication and performance of health assessment skills consistent with best practices. *Prerequisites: BIO 3347, L347, 3348, L348. Corequisite: NSG 3309.*

NSG 3313 Nursing Concepts (3)
Explores common health alterations for individuals of all ages in response to internal and external environmental dimensions. Examines the physical, psychosocial, cultural, and spiritual components influencing health states. Introduces the concept of illness as an alteration in health. Presents fundamental skills used in the implementation of therapeutic nursing interventions. Introduces evidence-based clinical decisions in the application of the nursing process for health promotion and clinical prevention. *Prerequisite: Admission to BSN Program. Prerequisite or Corequisite: NSG 2201, 3306, 3309/3310, 3315. Corequisite: NSG 3314.*

NSG 3314 Nursing Concepts Practicum (3-6)
Provides clinical learning opportunities for students to develop basic nursing knowledge and skills for the care of individuals of all ages who require assistance in meeting basic health needs and adapting to common health alterations. Uses key elements in professional nursing practice in the application of the nursing process as a systematic approach to clinical prevention, health promotion and maintenance, and illness and restorative care. Requires validation of competencies related to safe performance of basic nursing skills. *Prerequisite: Admission to BSN Program. Prerequisite or Corequisite: NSG 2201, 3306, 3309/3310, 3315. Corequisite: NSG 3313.*

NSG 3315 Pathophysiology (3)
Explores the relationship between normal and altered physiology in human systems. Examines physiological adaptive responses to internal and external dimensions, including genetics, ethnicity, environment and age. Emphasizes pathophysiologic responses to altered states of health and disease on structures and functions of body cells, organs and systems. Open to all majors. *Prerequisites: BIO 3347, L347, 3348, L348.*

NSG 3317 Nurse Extern Experience (1)
This course prepares the nursing student for the nurse extern experience and presents a practical approach to the development of skills necessary in the role of nurse extern. *Prerequisites: NSG 3313, 3314.*

NSG 3319 Informatics in Nursing (2)
Focuses on development of knowledge and skills in information management and patient care technology, including data gathering, technological supports for therapeutic nursing interventions, and clinical decision-support systems. Explores use of technology to gather evidence for support of best practices for the delivery of safe and quality nursing care. Presents software applications used in nursing informatics. *Prerequisites: NSG 3325/3326, 3334/3335 or admission to RN-BSN/MSN track.*

NSG 3323 Maternal-Infant Health Nursing (3)
Explores both normal childbearing families and childbearing families with health alterations in response to internal and external environmental dimensions. Examines the interrelationships among the physical, psychosocial, cultural, and spiritual components of the childbearing experience. Emphasizes evidence-based clinical decisions for the utilization of therapeutic nursing interventions, communication, and collaboration in a caring environment for the promotion of optimal health states of childbearing families. *Prerequisites: NSG 3301, 3325/3326, 3334/3335. Corequisite: NSG 3324.*

NSG 3324 Maternal-Infant Health Nursing Practicum (2-4)
Provides clinical learning opportunities for students to provide nursing care for childbearing families during the antepartal, intrapartal, postpartal, and neonatal periods. Emphasizes the use of clinical reasoning in the application of the nursing process in facilitating human adaptive responses to childbearing in the provision of safe, quality nursing care. *Prerequisites: NSG 3301, 3325/3326, 3334/3335. Corequisite: NSG 3323.*

NSG 3325 Adult Health Nursing I (3)
Continues to explore the concept of illness as an alteration in health states. Presents principles of safe, effective medication and intravenous therapy administration. Explore health alterations in adults in response to internal and external environmental dimensions, focusing on surgery, gastrointestinal, endocrine, integumentary, immune, and musculoskeletal systems. Examines selected theories for interrelationships among physical, psychosocial, cultural, and spiritual components. Emphasizes evidence-based clinical decisions in a caring environment for the utilization of therapeutic interventions, communication, and collaboration for promotion of optimal health states in adults. *Prerequisites: NSG 2201, 3306, 3309/3310, 3313/3314, 3315. Prerequisite or corequisite: NSG 3301. Corequisite: NSG 3326.*

NSG 3326 Adult Health Nursing I Practicum (3-6)
Provides clinical learning opportunities for students to refine basic clinical skills and provide nursing care of adults with health alterations. Emphasizes clinical reasoning in the application of the nursing process in facilitating human adaptive responses to health alterations in the adult. Validates competencies related to medication and intravenous therapy

administration. *Prerequisites: NSG 2201, 3306, 3309/3310, 3313/3314, 3315. Prerequisite or corequisite: NSG 3301. Corequisite: NSG 3325.*

NSG 3332 Child Health Nursing (3)

Explores health alterations in children in response to internal and external environmental dimensions. Examines selected theories of child health for interrelationships among developmental, physical, psychosocial, cultural, and spiritual components. Emphasizes evidence-based clinical decisions, communication and collaboration in a caring environment. Presents the role of the nurse in the promotion of optimal health for children of all ages. *Prerequisites: NSG 3319, 3323/3324, 3336/3337. Corequisite: NSG 3333.*

NSG 3333 Child Health Nursing Practicum (2-4)

Provides clinical learning opportunities for students to integrate clinical prevention, health promotion and maintenance, and illness and restorative care for children experiencing alterations in health states. Emphasizes clinical reasoning in the application of the nursing process in facilitating human adaptive responses to health alterations in the child in the provision of safe, quality nursing care. Uses a variety of hospital and community settings. *Prerequisites: NSG 3319, 3323/3324, 3336/3337. Corequisite: NSG 3332.*

NSG 3334 Psychiatric-Mental Health Nursing (3)

Explores mental health alterations of all ages in response to internal and external environmental dimensions. Examines selected theories of mental health and illness for interrelationships among physical, psychosocial, cultural, and spiritual components. Emphasizes evidence-based clinical decision-making in the utilization of therapeutic nursing interventions, communication and collaboration for the promotion of optimal states of mental health. *Prerequisites: NSG 2201, 3306, 3309/3310, 3313/3314, NSG 3315. Corequisite: NSG 3335.*

NSG 3335 Psychiatric-Mental Health Nursing Practicum (2-4)

Provides clinical learning opportunities for students to provide illness and restorative care for individuals experiencing alterations in mental health states. Emphasizes evidence-based clinical reasoning in the application of the nursing process in facilitating human adaptive responses to mental health alterations. *Prerequisites: NSG 2201, 3306, 3309/3310, 3313/3314, 3315. Corequisite: NSG 3334.*

NSG 3336 Adult Health Nursing II (3)

Continues to explore health alterations for adults in response to internal and external environmental dimensions, focusing on cardiovascular, respiratory, nervous, sensory, renal, reproductive, and multi-system trauma and shock. Examines selected theories for interrelationships among physical, psychosocial, cultural, and spiritual components. Emphasizes evidence-based clinical decisions in a caring environment for the utilization of therapeutic interventions, communication, and collaboration for promotion of optimal health states in adults. *Prerequisites: NSG 3301, 3325/3326, 3334/3335. Corequisite: NSG 3337.*

NSG 3337 Adult Health Nursing II Practicum (2-4)

Provides clinical learning opportunities for students to further refine clinical skills and provide nursing care for adults with alterations in health states. Emphasizes clinical reasoning in the application of the nursing process in facilitating human adaptive responses to health alterations in the adult in the provision of safe, quality nursing care. *Prerequisites: NSG 3301, 3325/3326, 3334/3335. Corequisite: NSG 3336.*

NSG 3340 Ethics in Nursing (3)

A discussion of traditional ethical theories, principles and meta-ethical concerns will provide the necessary background required to explore a variety of controversial issues such as euthanasia, abortion, and the new reproductive technologies. Objective and critical reflection about the issues will be developed into active discussions by the students. *Prerequisite: Permission of instructor.*

NSG 3350 Case Management in Healthcare (2)

Provides theoretical foundation and practical information about case management in healthcare. Introduces the roles of the nursing case manager in a changing health care environment. *Prerequisite: NSG 3325.*

NSG 3370 Professional Nursing (2)

Explores current issues, trends, principles, values, and standards impacting the profession of nursing. Examines theories related to the leadership/management role of the professional nurse. Discusses evidence-based practice, information technology, quality improvement, patient safety and other current nursing practice topics related to meeting the emerging health needs in changing diverse global society in response to internal and external environmental dimensions. *Prerequisites: current Registered Nurse license and admission to the RN to BSN/MSN clinical nursing sequence.*

NSG 4405 Public Health Nursing (3)

Provides a theoretical and empirical foundation for public health nursing practice. Explores the environmental, global, cultural, political and financial dimensions of public health. Emphasizes the nurse's role in the delivery of public health nursing care in health promotion and clinical prevention health for individuals, families, communities and populations. *Prerequisites: NSG 3332/3333, 4413/4414, 4419 or admission to the RN-BSN/MSN Clinical nursing sequence. Corequisite: NSG 4406.*

NSG 4406 Public Health Nursing Practicum (2-4)

Provides clinical learning opportunities for students to engage in public health nursing practice. Explores use of advocacy and application of environmental, global, cultural, political, and financial dimensions of public health nursing practice in health promotion and clinical prevention for individuals, families, communities and populations. Emphasizes clinical reasoning in the application of the nursing process for promotion of optimal public health. *Prerequisites: NSG 3332/3333, 4413/4414, 4419 or admission to the RN-BSN/MSN clinical nursing sequence. Corequisite: NSG 4405.*

NSG 4407 Clinical Nutrition (1)
A study of clinical nutrition therapy for support of adaptive responses to potential or actual major disease-specific health alterations. Presents best practices with consideration of physical, psychosocial, cultural and developmental components for clinical decisions in the design and implementation of therapeutic nursing interventions for health promotion and clinical prevention for individuals, families, communities, and population. *Prerequisites: NSG 3332/3333, 4413/4414 or admission to the RN-BSN/MSN clinical nursing sequence.*

NSG 4413 Complex Nursing (3)
Interprets complex, multi-system health alterations in response to internal and external environmental dimensions. Examines theories related to stress and crisis management. Emphasizes evidence-based clinical decisions in a caring environment, utilization of communication and collaboration, and the integration of information technology, research findings, ethical competence, and cultural humility in nursing practice for the promotion of optimal health in individuals with complex, multi-system health alterations. *Prerequisites: NSG 3323/3324, 3336/3337, 3319. Corequisite: NSG 4414.*

NSG 4414 Complex Nursing Practicum (2-4)
Provides clinical learning opportunities for students to provide nursing care for individuals and groups experiencing complex, multi-system health alterations in response to internal and external dimensions. Emphasizes clinical reasoning in the application of the nursing process in collaboration for promotion of optimal health states in response to complex, multi-system health alterations. Focuses on performance of complex care skills required for safe, quality nursing care. *Prerequisites: NSG 3323/3324, 3336/3337, 3319. Corequisite: NSG 4413.*

NSG 4415 Nursing Leadership/Management (2)
Provides the theoretical foundation for implementation of the leadership and management roles of the professional nurse within nursing and health care organizations. Evaluates effective models and strategies for organizational management. Emphasizes evidence-based decisions in the management of the nursing organization within a caring environment. *Prerequisites: NSG 3332/3333, 4413/4414, 4419. Corequisite: NSG 4421.*

NSG 4417 Professional Nursing Seminar (1)
Provides analysis of internal and external dimensions of selected professional, legal, ethical, political, economic, and sociocultural issues affecting nursing. Discusses the transition from student into the professional nurse's role, professional role development, and preparation for licensure. Requires satisfactory completion of exit exam per BSN program policy. *Prerequisites: NSG 3332/3333, 4413/4414, 4419. Corequisite: NSG 4421.*

NSG 4419 Research and Evidence in Nursing Practice (2)
Explores the process for research and evaluation of best evidence in developing strategies for improvement of clinical outcomes. Examines the interrelationships among theory, practice, and research. Emphasizes the ethical and legal considerations in the conduct of research and appraisal of evidence. *Prerequisites: NSG 3323/3324, 3336/3337, 3319 or Admission to the RN-BSN/MSN clinical nursing sequence or permission of instructor.*

NSG 4421 Professional Nursing Clinical Preceptorship (3-12)
Facilitates transition into professional nursing practice. Provides opportunities for refinement of roles as a designer, manager, and coordinator of nursing care and provider of direct and indirect nursing care for individuals and families in a selected clinical area under the guidance of an approved preceptor. *Prerequisites: NSG 3332/3333, 4413/4414, 4419. Corequisite: NSG 4415, 4417.*

NSG 4430 Advanced Nursing Theory (3)
Presents application of the synergy model for comprehensive nursing care of individuals, families, communities, or populations adapting to internal and external environmental dimensions in a variety of dynamic and complex health care setting. Discusses the leadership and management roles of the baccalaureate nurse. Integrates evidence-based practice, quality improvement, patient safety, information technology and health care policy. *Prerequisites: Admission to the RN-BSN/MSN clinical nursing sequence, NSG 3309/3310, 3319, 3370, 4405/4406. Corequisite: NSG 4431.*

NSG 4431 Advanced Nursing Preceptorship (2-6)
Provides clinical learning opportunities for students to apply the synergy model in the comprehensive nursing care of individuals, families, communities or populations adapting to internal and external dimensions in a variety of dynamic and complex healthcare settings. Emphasizes the leadership and management roles of the baccalaureate nurse. Integrates evidence-based practice, quality improvement, patient safety, information technology and healthcare policy. *Prerequisites: Admission to the RN-BSN/MSN clinical nursing sequence, NSG 3309/3310, 3319, 3370, 4405/4406. Corequisite: NSG 4430.*

NSG 4493-4494 Guided Independent Study (1-3)
Additional information is indexed under Academic Regulations. *Prerequisite: Permission of instructor. Also see index for "Independent Study and Research."*

PERSIAN COURSES (PER)

PER 1101 Introductory Persian (Farsi) I (3-3)
Introduction to the Modern Persian language.

PER 1102 Introductory Persian (Farsi) II (3-3)
Introduction to the Modern Persian language. *Prerequisite: PER 1101 or permission of instructor.*

PER 2201 Intermediate Persian (Farsi) I (3-3)
Progressive development of basic language skills in Modern Persian. *Prerequisite: PER 1102 or permission of instructor.*

PER 2202 Intermediate Persian (Farsi) II (3-3)
Progressive development of basic language skills in Modern Persian. *Prerequisite: PER 2201 or permission of instructor.*

PHILOSOPHY COURSES (PHI)

PHI 2201 Introduction to Political Philosophy (3)
Major Classical sources of political thought and the application of these sources to contemporary political issues.

PHI 2203 Introduction to Philosophy (3)
Brief history of philosophical ideas and the basics of Aristotelian logic.

PHI 2204 Ethics and the Modern World (3)
An introduction to basic ethics and to contemporary ethical issues.

PHI 3301 Western Philosophy (3)
Survey of philosophical ideas from the ancient Greeks through the 20th century.

PHI 4493-94 Guided Independent Study (1-3 credit hours each)
Guided independent study of a designed topic of special interest. *Prerequisites: PHI 2203 or 2204 or permission of instructor.*

PHI 4495 Selected Topics in Philosophy (3)
Advanced study of a designed topic of special interest. *Prerequisites: PHI 2203 or 2204 or permission of instructor.*

PHYSICS COURSES (PHY)

PHY 2252 General Physics I (3)
An introduction to the laws of mechanics and thermodynamics. *Prerequisite: MTH 1114 or 1115. Co-requisite: PHY L252.*

PHY L252 General Physics I Laboratory (1)
Laboratory work emphasizes basic principles of mechanics and thermodynamics, the use of measuring instruments, and the interpretation of data. *Co-requisite: PHY 2252.*

PHY 2253 General Physics II (3)
An introduction to the laws of optics, electricity and magnetism. *Prerequisite: PHY 2252, L252. Co-requisite: PHY L253.*

PHY L253 General Physics II Laboratory (1)
Laboratory work emphasizes basic principles of electricity, magnetism and optics, the use of measuring instruments, and the interpretation of data. *Co-requisite: PHY 2253.*

PHY 2262 Physics I with Calculus (3)
Principles and laws of mechanics and thermodynamics, utilizing the methods of calculus. *Prerequisite: MTH 1125. Co-requisite: PHY L262.*

PHY L262 Physics I with Calculus Laboratory (1)
Laboratory work emphasizes basic principles of thermodynamics and mechanics, the use of measuring instruments, and the interpretation of data. *Co-requisite: PHY 2262.*

PHY 2263 Physics II with Calculus (3)
Principles of electricity, magnetism and optics, utilizing the methods of calculus. *Prerequisite: PHY 2262, L262. Co-requisite: PHY L263.*

PHY L263 Physics II with Calculus Laboratory (1)
Laboratory work emphasizes basic principles of electricity, magnetism and optics, the use of measuring instruments, and the interpretation of data. *Co-requisite: PHY 2263.*

PHY 4410 Modern Physics (3)
Special relativity, quantum mechanics, and many electron systems. *Prerequisites: MTH 1125 and PHY 2253, L253 or PHY 2263, L263. Co-requisite: PHY L410.*

PHY L410 Modern Physics Laboratory (1)
Selected experiments in modern physics. *Co-requisite: PHY 4410.*

PHY 4411 Advanced Modern Physics (3)
Foundations of statistical physics, solid state physics, nuclear physics, elementary particles, astrophysics, and cosmology. *Prerequisite: PHY 4410*

PHY 4420 Mechanics (3)
Kinematics and dynamics of particles and systems of particles. *Prerequisite: MTH 2227 and PHY 2253, L253 or PHY 2263, L263.*

PHY 4430 Electromagnetic Fields (3)
Vector fields, dielectric and magnetic media, fields in conductors, electric and magnetic circuit elements. Maxwell's equations and boundary condition problems in one, two and three dimensions. *Prerequisite: MTH 2227 and PHY 2253, L253 or PHY 2263, L263.*

PHY 4459 Optics (3)
The principles of geometrical and physical optics. Image formation, refraction, diffraction, origin of spectra, polarized light, and optical activity. *Prerequisite: PHY 2253 and L253 or PHY 2263 and L263. Co-requisite: PHY L459.*

PHY L459 Optics Laboratory (1)
Selected experiments in geometric and physical optics. Laboratory work emphasizes the basic prin-

ciples of optics, the use of measuring instruments, and the interpretation of data. *Co-requisite: PHY 4459.*

PHY 4491-4492 Guided Independent Research (1-4)
A physics research project under the direction of a faculty member. The project must culminate in a written report with the results reported at a department seminar. *Prerequisite: Senior standing or permission of department chair. Also see index for "Independent Study and Research."*

PHY 4493-4494 Guided Independent Study (1-4)
Independent study for advanced students under the direction of a faculty member. *Prerequisite: Permission of department chair. Also see index for "Independent Study and Research."*

PHY 4495 Topics in Physics (3)
Focus on a topic of timely nature and/or special interest. *Prerequisites: PHY 2253 and L253 or PHY 2263 and L263.*

POLITICAL SCIENCE COURSES (POL)

POL 2240 Honors American National Government (3)
This course explores the stable political values that frame the US Constitution and have guided our societal environment for two hundred years. The course is intended for superior students and political science majors.

POL 2241 American National Government (3)
A study of the Constitution, federalism, the Presidency, Congress, the courts, and politics on the national level.

POL 2260 World Politics (3)
An investigation of the development, nature, and process of political actions across national boundaries in the global system. Topics include international security, comparative government, international political economy, international organizations, and new global issues.

POL 3300 Foundations of Political Science (3)
An introduction to the discipline of political science, this course offers an overview of the subfields and methods within the discipline.

POL 3315 The Vietnam War (3)
A study of the period 1946 to 1975 in Indochina with emphasis on the American involvement during and after the French colonial period, escalating involvement of the Kennedy and Johnson administrations, and Vietnamization and withdrawal under President Nixon. *Prerequisites: His 1111 and 1112.*

POL 3330 Political Theory (3)
An examination of selected advanced sources of classical and modern political theory. Theoretical perspectives, which are prominent in contemporary political science, are investigated.

POL 3340 U.S. Government – Executive Branch (3)
An analysis of the American Presidency in the context of the Constitution, American political processes, national security, public opinion, and other branches of American government.

POL 3341 U.S. Government – Legislative Branch (3)
An analysis of the structure and dynamics of the U.S. Congress in the context of its relationships to the Constitution, the presidency, the judiciary, political processes and subordinate levels of government.

POL 3342 U.S. Government – Judicial Branch (3)
An analysis of the American federal judiciary in the context of its relationships to the Constitution, American political processes, the legislative and executive branches, state governments, and public opinion.

POL 3343 American Political Processes (3)
This course examines key topics in U.S. politics, specifically looking at national problems, actors and proposed solutions.

POL 3351 International Relations (3)
This course provides a comprehensive investigation of thinking about the relationship of both state and non-state actors in the international arena. It offers a framework for the further analysis of the discipline of International Relations including the principal schools of IR theory, the historical development of the contemporary international system, foreign policies of states, the search for state security, and the economic relationships between states within a global political context.

POL 3360 Contemporary Political Thought (3)
This course examines recent areas of research in political theory, including current issues of debate on the state, democratic theory, liberalism, conservatism, and feminism.

POL 3364 State and Local Politics (3)
An investigation of political processes and organization at the state and local level in the United States.

POL 4402 Political Geography (3)
An analysis of the reciprocal effects of geography and political organization on the behavior of states, including boundaries, national resources, spatial strategies, and maritime power.

POL 4410 International Political Economy (3)
An examination of the interrelationships between international politics and economics; states and markets, trade, foreign investment, international monetary affairs, foreign aid, state development strategies, and globalization.

POL 4415 International Conflict (3)
This course provides a detailed examination of patterns of international conflict and methods employed to manage them: bases, emergence, escalation, de-escalation, negotiation, mediation, termination, and consequences. Specific episodes of international conflict will be investigated.

POL 4420 Constitutional Law (3)
A survey of the legal, political, and methodological problems in constitutional law.

POL 4421 Introduction to Public Administration (3)
An introduction to the historical, institutional, and political context of the profession; current trends and issues; and the role of public administration in the larger governmental system.

POL 4422 Public Policy Making (3)
An introduction to the processes by which American public policy is formulated, implemented, and evaluated and to the roles of policy analysts in solving various public problems.

POL 4423 American Foreign Policy to 1920 (3)
A study of the factors, forces and functions in the making of American foreign policy from the 1760s to the end of World War I.

POL 4424 Contemporary American Foreign Policy (3)
This course examines the foreign policy processes of the United States: historical traditions, political institutions, economic and military capabilities, the Congress, the Presidency, interest groups, the media, and public opinion.

POL 4432 Comparative Public Policy (3)
This course examines the process of policy making in a cross-comparative framework that illustrates how different nation states, both in the developed and the developing worlds, formulate and implement public policy.

POL 4433 Comparative Government (3)
A comparative analysis of state governments in the world with an emphasis upon political cultures, governmental institutions and political processes that lead to differences and international tensions.

POL 4440 Political Sociology (3)
An examination of the inter-relationship of social forces and politics, with an emphasis on institutions, political movements, sources and distribution of power, and public policy.

POL 4445 Inter-American Relations (3)
This course examines the relationship between the United States and the remainder of the Western Hemisphere, with an emphasis on historical and contemporary Latin American relations.

POL 4450 Latin American Politics (3)
An introduction to the social and political institutions of Latin America

POL 4451 Public Personnel Administration (3)
A survey of the basic principles and functions of personnel administration in the public service and of the current strategies for managing recruitment, placement, salary and benefit strategies, training, retirement, and other personnel functions.

POL 4452 International Law (3)
This course examines the sources and development of international law from a historical, political, jurisprudential, and philosophical standpoint. It will include a comprehensive investigation of state sovereignty, jurisdiction, the role of the United Nations, the regulation of the use of force in world affairs, and international human rights law.

POL 4453 Bureaucratic Politics (3)
A study of the theories of organizations and their structures as they effect the policymaking environment, examining goals, resources, effectiveness, equilibrium, and change relating to organizations and their relationship to administration.

POL 4460 Intercultural Relations (3)
An analysis of the influence of culture on interstate relations including theories, concepts, and applications.

POL 4465 Politics of the Developing World (3)
This course examines the political and economic challenges faced by developing states. Theories and models of development will be analyzed in a variety of ways.

POL 4466 Middle Eastern Politics (3)
An introduction to the social and political institutions of the contemporary Middle East

POL 4470 European Politics (3)
An introduction to the social and political institutions of contemporary Europe.

POL 4471 Intergovernmental Relations (3)
The administrative, fiscal, and legal factors that govern relations between the various government entities in the United States. The focus is on the political conflicts that occur and the strategies for resolution.

POL 4472 Administrative Law (3)
This course examines the legal environment in which government agencies function, including the powers and procedures that control administrative discretion, rule-making, investigations, prosecuting, negotiating, and settling; constitutional law, statutory law, common law, and agency-made law; the liability of governments and their officers; and selected court cases and decisions.

POL 4474 Terrorism and Political Violence (3)
This course is designed to introduce students to the origins and significance of contemporary political violence with an emphasis on the phenomenon of terrorism. It employs an interdisciplinary, case-study approach.

POL 4476 Politics of Southeast Asia (3)
This course involves the study of politics in the Philippines, Indonesia, Vietnam, Laos, Kampuchea, Malaysia, Singapore, Brunei, Myanmar, and Thailand. It investigates the historical and cultural factors contributing to their political relationships within the region and internationally

POL 4490 Internship in Political Science (1-3)
Supervised work in an agency that can provide practical experience in the field of study. *Prerequisites: senior standing and approval of supervising instructor and the department chair.*

POL 4491-4492 Guided Independent Research (1-3 credit hours each)
Additional information is indexed under Guided Independent Research and Study.

POL 4493 – 4494 Guided Independent Study (1-3 credit hours each)
Additional information is indexed under Guided Independent Research and Study.

POL 4495 Selected Topics in Political Science (3)
Examines selected topics of a timely nature and/or special interest within the field of political science.

PSYCHOLOGY COURSES (PSY)

PSY 2200 General Psychology (3)
A survey of the basic theories, concepts, principles, and research findings in the field of psychology.

PSY 2201 Honors General Psychology (3)
A survey of the basic theories, concepts, principles, and research findings in the field of psychology.

PSY 2205 Psychology of Adjustment (3)
A course in mental health, designed to assist the individual in making a good adjustment to the changing requirements of the environment.

PSY 2210 Developmental Psychology (3)
A study of human development across the life-span with emphasis on psychosocial, physical, emotional, and cognitive changes.

PSY 2230 Orientation to Psychology (3)
Introduction to the language of psychology, APA writing style, and library research. Also includes an over view of career paths in psychology.

PSY 3301 Basic Statistics (3)
An introduction to descriptive and inferential statistical concepts, methods, and tools. Topics to be covered include basic terminology, measurement, data description, probability, hypothesis testing, and inferential tests (parametric and non-parametric). May be used for Sociology credit. *Prerequisite: MTH 1110 or higher, with a grade of C or above.*

PSY 3303 Educational Psychology (3)
Characteristics of the learner and the teaching-learning process. Theories of learning, instruction, and motivation, and their application to students in grades P-12.

PSY 3304 Abnormal Psychology (3)
The study of mental disorders emphasizing their etiology, classification and amelioration as described in the current classification system of the American Psychiatric Association.

PSY 3309 Advanced Statistics (3)
Advanced quantitative methods in psychology. Topics include linear regression, analysis of variance, non-parametric techniques, estimation procedures, individual and multiple comparisons, and experimental design. *Prerequisite: PSY 3301.*

PSY 3310 Sensation and Perception (3)
A study of how sensory information helps both the human species and other animals to thrive. Exploration of the senses including their physiological makeup, development and functioning. Theoretical and empirical foundations of perception and the applications of perceptual knowledge are emphasized. *Prerequisite: Six semester hours of psychology and sophomore standing or above.*

PSY 3311 Research Methods (3)
An introduction to the design, analysis, and interpretation of behavioral research, including strategies for reviewing scientific literature and organizing a research report. *Prerequisite: PSY 3301.*

PSY 3312 Psychology of Women (3)
The study of women's experience and gender issues in the context of psychological theory and research.

PSY 3320 Child Psychology (3)
The development of children from conception to puberty. Includes physical, cognitive, perceptual, language, social and emotional development.

PSY 3322 Abnormal Child Psychology (3)
A study of theories, research, etiology, assessment and diagnosis of mental disorders first seen in childhood or adolescence as defined by the current edition of the *Diagnostic and Statistical Manual of Mental Disorders.* Includes such disorders as ADHD, conduct problems, anxiety, mood, mental retardation, and autism.

PSY 3325 Adolescent Psychology (3)
Adolescents from puberty to early adulthood. Includes physical, cognitive, social, emotional, and personality development in cultural context.

PSY 3330 Health Psychology (3)
This course studies the science that connects behavior to health, including psychological processes and the relationship between health and human behavior.

PSY 3332 Family Violence (3)
An in-depth study of violence in families, including spousal abuse, child abuse, elder abuse, relationship dynamics, protection services, treatment programs, legal defense strategies, and current legislation. *Prerequisite: junior standing or above. NOTE: May be taken for psychology or sociology credit, but not both.*

PSY 3340 Psychology of Learning (3)
Introduction to learning and behavior in human and nonhuman animals, including fundamental principles and findings from laboratory investigations of classical, instrumental, cognitive, and social learning.

PSY 3346 Educational Assessment (3)
This course provides a study of measurement and evaluation techniques for the classroom teacher. Emphasis will be placed on the selection, evaluation, administration, scoring and interpretation of selected measures of student performance, achievement and behavior. The student will demonstrate skills in utilizing measurement data to plan appropriate learning activities for students. *Prerequisite: Admission to TEP. NOTE: May not be used to meet the requirements for the psychology major or minor.*

PSY 3351 Theories of Learning (3)
Critical analysis of the major theories of learning, including the works of Pavlov, Thorndike, Guthrie, Tolman, Hull, Skinner, and Mowrer.

PSY 3360 Forensic Psychology (3)
Forensic psychology is the application of the science and profession of psychology to questions and issues relating to law and the legal system. This course will introduce students to the specialty area of forensic psychology. Particular emphasis will be on applied aspects of the field. *Prerequisite: Six semester hours of psychology.*

PSY 3365 Human Factors Psychology (3)
Analysis of theoretical issues and research methods related to the interaction between people and machines and human performance. Topics include information processing theory, human control systems and displays, task simulation, perceptual and motor factors limiting human performance. *Prerequisite: Six semester hours of psychology.*

PSY 3370 Comparative Psychology (3)
This course examines the development, causal mechanisms, evolutionary history, and function of the behavior of animals, including humans.

PSY 3380 Social Psychology (3)
A theoretical and empirical analysis of social behavior, including selected topics related to social perception, social influence, social interaction, and applied social psychology.

PSY 3385 Evolutionary Psychology (3)
An examination of human behavior and cognition from an evolutionary perspective.

PSY 3390 Special Topics in Psychology (3)
An examination of selected topics or issues in psychology. May be repeated for credit when the course content varies. *Prerequisite: Six semester hours of psychology.*

PSY 4400 Advanced General Psychology (3)
A comprehensive study of the discipline of psychology designed to expand the student's depth and breadth of knowledge in psychology. *Prerequisite: 15 semester hours of psychology.*

PSY 4401 Psychological Tests and Measurements (3)
Selection, evaluation, administration, scoring, interpretation and uses of tests of intelligence, proficiency, interests, personality, aptitude and social adjustment. *Prerequisite: PSY 3301, additional three semester hours of psychology.*

PSY 4402 Principles of Counseling (3)
Overview of major counseling theories and techniques, interviewing, assessment, professional issues and ethics, and a review of research and practical problems. *Prerequisite: Six semester hours of psychology.*

PSY 4405 Experimental Psychology (3)
Various techniques for conducting scientific research in psychology will be discussed. Course objectives include designing and conducting an experiment as well as analyzing and reporting the results. *Prerequisite: PSY 3301, additional three semester hours of psychology.*

PSY 4410 Business and Industrial Psychology (3)
Application of psychology in business and industry, including employee selection, performance appraisal, motivation, organizational psychology, consumer motivation, group structures, and personnel problems.

PSY 4420 Physiological Dynamics of Alcohol and Other Drugs (3)
Study of physiological and psychological dynamics and resultant behavioral implications in use of alcohol and other drugs. Based on assessment of dynamics and behavior and application of diagnostic procedures using appropriate manuals and materials. *Prerequisite: senior standing.*

PSY 4421 Physiological Psychology (3)
The physiological correlates of behavior will be examined, including such topics as neurotransmitters and hormones, drugs, and the biological roots of mental disorders. *Prerequisite: Six semester hours of psychology.*

PSY 4430 Introduction to Substance Abuse Counseling (3)
This course provides an introduction to substance abuse counseling through studies of mind-altering substances; etiological theories of addiction; assessment interviewing and screening tests; individual, group, family, and other treatment options; relapse prevention; and community prevention programs.

PSY 4434 Drug Education, Prevention and Intervention (3)
A study of commonly abused drugs, drug abuse prevention, and treatment techniques. Examines characteristics of people at high risk to become substance abusers/addicted. *Prerequisite: senior standing.*

PSY 4435 Treatment of Addictive Family Diseases (3)
A study of typical characteristics of dysfunctional families. Provides the basis for suggested intervention techniques, appropriate areas of family education, and guidelines for effective therapy. *Prerequisite: senior standing.*

PSY 4436 Treatment Theories and Modalities of Addictive Diseases (3)
A study of historical perspectives and the most effective treatment and assessment approaches of addictive diseases. *Prerequisite: senior standing.*

PSY 4450 Theories of Personality (3)
Critical analysis of major theories and systems of personality. *Prerequisite: Six semester hours of psychology.*

PSY 4451 History and Systems of Psychology (3)
Study of the development of psychology from its historical antecedents with special emphasis placed on contemporary schools and systems of psychological thought. *Prerequisite: Six semester hours of psychology.*

PSY 4456 Gerontology (3)
The study of aging. Emphasis on biomedical, psychological, and social aspects of middle and late adulthood.

PSY 4459 Applied Behavior Analysis (3)
Training and experience in design, execution, and evaluation of behavior modification for professionals in fields of counseling, education, rehabilitation, and psychology. Provides study of key concepts of classical and operant conditioning, as well as discussion and application of specific strategies building on conditioning principles. *Prerequisite: Six semester hours of psychology.*

PSY 4460 Cognitive Psychology (3)
A study of human intellectual functioning including attention, perception, memory, problem solving, reasoning and language. *Prerequisite: Six semester hours of psychology.*

PSY 4470 Advanced Theories of Developmental Psychology (3)
Comparative study of major developmental theories from the exogenous, endogenous, and constructivist paradigms. Includes history, structural components, contributions, criticisms, evaluation, and relevant research of each theory. *Prerequisite: Six semester hours of psychology.*

PSY 4475 Theories of Training and Evaluation (3)
Examines evaluation issues such as criteria development, organizational assessment, process and outcome criteria, along with instructional methodologies such as fairness in training, special populations, second careers, and ethics of organizational and industrial change. *Prerequisite: Six semester hours of psychology.*

PSY 4480 Senior Seminar in Psychology (3)
A capstone course designed to integrate subject matter learned in previous courses, encourage critical analysis of contemporary issues, and contemplate future educational and employment opportunities in psychology. *Prerequisite: Senior standing.*

PSY 4491 Guided Independent Research (3)
This course is designed to provide supervised research in the area of psychology. Opportunities for undergraduate research will be approved with attention to critical evaluation of research techniques, methods, and procedures. Selection of the problem must be approved by the professor under whom the study is to be conducted and the department chair or dean. A written request is to be submitted to the department chair at least two weeks in advance of the term in which study is to be undertaken. Preparation of a scholarly paper and oral defense may be required. *Prerequisite: Junior or senior standing with a minimum overall GPA of 3.0. Guided independent research may be taken only in the applicant's major or minor field. May not be used to repeat a course for which a grade of D or below has been earned. Also see index for "Independent Study and Research."*

PSY 4492 Guided Independent Research (1-3)
This course is designed to provide supervised research in the area of psychology. Opportunities for undergraduate research will be approved with attention to critical evaluations of research techniques, methods, and procedures. Selection of the problem must be approved by the professor under whom the study is to be conducted and the department chair or dean. A written request is to be submitted to the department chairperson at least two weeks in advance of the term in which study is to be undertaken. Preparation of a scholarly paper and oral defense may be required. *Prerequisite: Junior or senior standing with a minimum overall GPA of 3.0. Guided independent research may be taken only in the applicant's major or minor field. May*

not be used to repeat a course for which a grade of D or below has been earned. Also see index for "Independent Study and Research."

PSY 4493 Guided Independent Study (1-3)
Supervised study through field or laboratory projects, guided readings, creative endeavors or achievement of specific skills. *Prerequisite: Junior or senior status, permission of guiding professor, approval of department chairperson and the dean. A written request is to be submitted to the department chairperson at least two weeks in advance of the term in which study is to be undertaken. May not be used to repeat a course for which a grade of D or below has been earned.*

PSY 4494 Guided Independent Study (1-3)
Supervised study through field or laboratory projects, guided readings, creative endeavors or achievement of specific skills. *Prerequisite: Junior or senior status, permission of guiding professor, approval of department chairperson and the dean. A written request is to be submitted to the department chairperson at least two weeks in advance of the term in which study is to be undertaken. May not be used to repeat a course for which a grade of D or below has been earned. Also see index for "Independent Study and Research."*

QUANTITATIVE METHODS COURSES (QM)

QM 2241 Business Statistics I (3)
An introduction to descriptive and inferential statistical concepts and methods. Topics include grouping of data, measures of central tendency and dispersion, probability concepts and distributions, sampling, statistical estimation, and statistical hypothesis testing. *Prerequisite: MTH 1112.*

QM 3341 Business Statistics II (3)
A continuation of basic business statistics. Topics include comparison involving means and proportions, ANOVA, simple linear regression and correlation, multiple linear regression, chi-squared applications, nonparametric methods, and simple decision analysis. *Prerequisite: QM 2241.*

QM 3342 Introduction to Operations Research (3)
An introduction to quantitative techniques applicable to business and economics. Topics include queuing analysis, transportation programming, PERT/CPM, and simple linear regression. *Prerequisite: QM 2241.*

READING/LITERACY COURSES (RED)

RED 0098 Reading I (3)
A course for those students who are deficient in basic reading skills such as word recognition, comprehension and study skills. A placement test will be required. *NOTE: May not be audited. Institutional credit only.*

RED 3380 Children's Literature (3)
The purpose of this course is to assist undergraduate students as they investigate and construct an understanding of and techniques to incorporate children's literature across the curriculum. Pertinent topics include award-winning authors and titles found in children's literature among a variety of genre, along with developmentally appropriate instructional techniques. *Prerequisite: Admission to TEP.*

RED 4481 Language and Literacy I: Grades P-3 (3)
Literacy instruction for the P-3 learner with emphasis on child development, learning theories, individual differences, emergent and early literacy, and examination of current materials and instructional practices used in teaching literacy. *Prerequisite: Admission to TEP.*

RED 4482 Language and Literacy II: Grades 4-6 (3)
Literacy instruction for the learner in grades 4-6 with emphasis on the principles of reading and language arts instruction, teaching strategies, and methods of expanding reading power. This course requires substantial field experience in the grades 4 -6 setting. *Prerequisite: Admission to TEP.*

RED 4483 Language and Literacy III: Intervention Strategies (3)
Principles of assessment and evaluation for improving the language and literacy learning. Pre-service teachers will be introduced to the variety of screening and testing instruments for use in modifying students' instructional programs. Formal and informal methods for classroom observations will be explored, and methods for translating data collected for classroom management and/or communication to learners' parents will be introduced. The issues of privacy and ethical treatment of confidential records will also be addressed. *Prerequisite: Admission to TEP, RED 4481.*

RED 4484 Language and Literacy IV (3)
This course provides a study of teaching reading in grades P-12, emphasizing methods in the content areas. *Prerequisites: EDU 3310, 20 semester hours in the major, and admission to TEP.*

RED 4491-4492 Guided Independent Research (1-3)
Undergraduate research with attention to critical evaluation of research techniques, methods and procedures. *Prerequisites: junior or senior standing with a minimum overall GPA of 3.0, permission of guiding professor, approval of department chairperson or dean. A written request is to be submitted to the department chairperson at least two weeks in advance of the term in which study is to be undertaken. May not be used to repeat a course for which a grade of D or below has been earned. Application forms are available in the Office of University Records. Guided independent research may be taken only in the applicant's major or minor field. Also see index for "Independent Study and Research."*

RED 4493-4494 Guided Independent Study (1-3)
Supervised study through field or laboratory projects, guided readings, creative endeavors or achievement of specific skills. *Prerequisites: junior or senior status, permission of guiding professor, approval of department chairperson and the dean. A written request is to be submitted to the department chairperson at least two weeks in advance of the term in which study is to be undertaken. May not be used to repeat a course for which a grade of D or below has been earned. Also see index for "Independent Study and Research."*

RELIGION COURSE (REL)

REL 2280 World Religions (3)
Historical development and basic beliefs of the world's major religions.

REHABILITATION COURSES (RHB)

RHB 2280 Rehabilitation Research I (3)
Introduction to statistical analysis concepts and principles necessary for understanding research reports and for the interpretation of data. Use of microcomputer statistical programs in the analysis of univariate, bivariate, and multivariate data including parametric and non-parametric analysis techniques. Topics include descriptive techniques, averages and measures of variation, tests of statistical significance, correlation and regression, and analysis of variance. *Prerequisite: MTH 1110 or 1112 and IS 2241.*

RHB 2281 Rehabilitation Research II (3)
Introduction to research methodology and process with emphasis placed on the evaluation of practice. Understanding and using the journal research article as a tool for selecting appropriate intervention. Skills are built in using electronic data bases and information retrieval systems and integrated with writing skills necessary to critically evaluate the usefulness of research studies in practice application. *Prerequisite: RHB 2280.*

RHB 3320 Human Behavior In the Social Environment II (3)
An examination of the social dynamics of discrimination and oppression and particularly, how discriminatory and oppressive environments have potential for negatively affecting biopsychosocial growth and development.

RHB 3340 Social Policy and Planning (3)
Exploration of the social policy formulation process and the building of analysis skills in the evaluation of social policy and programs. The impact of political, economic, and social forces is a focal point, and the process of incrementalism in implementation is examined. *Prerequisites: HS 2230 or permission of instructor.*

RHB 3345 Foundations of Rehabilitation (3)
Review of historical, philosophical, and legislative development of the rehabilitation movement; focuses on current service delivery systems and trends. *Prerequisite: HS 2230.*

RHB 3350 Individual Differences and the World of Work (3)
An orientation into the world of work along with the meaning and importance of work to the individual, family and community. Includes job search techniques, methods of doing job surveys and ways of classifying information. *Prerequisite: HS 2230 or permission of instructor.*

RHB 3360 Vocational Assessment (3)
Processes, principles, and techniques used to diagnose vocational assets and liabilities of the individual. Emphasis upon the use of psychometric tests, work samples, and job samples. *Prerequisite: HS 2230 or permission of instructor.*

RHB 3365 Introduction to Visual Impairment (3)
This course will provide an understanding of the medical, psychological, social, educational, and vocational issues that professionals must understand in order to work effectively with persons who are visually impaired.

RHB 3380 Medical and Vocational Aspects of Physical Disabilities (3)
Examines specific physical disabilities from medical, psychological, social, and vocational points of view. Covers a number of disabling conditions including etiology, characteristics, and implications for treatment.

RHB 3385 Rehabilitation of Persons with Severe Disabilities (3)
Course explores rehabilitation needs of persons with severe disabilities. Concepts, approaches, philosophy and ethical considerations related to independent living, supported employment, and advocacy efforts.

RHB 4405 Juvenile Rehabilitation and Counseling (3)
Treatment modalities, diagnostic techniques, intervention systems, concurrent problems, and counseling techniques with adolescents. Emphasis is upon evaluation of services, i.e., vocational, self-concepts, academic, psychotherapy, peer relations, group counseling, family relations, and life skill development.

RHB 4410 Rehabilitation Pre-practicum (1)
Preparation for RHB 4420. *Prerequisites: Completion of departmental core and Rehabilitation Program course requirements (except practicum).*

RHB 4420 Rehabilitation Practicum (12)
Provides experience in a rehabilitation setting with an emphasis on the multiple nature of human problems and the impact these problems have on persons with disabilities. Includes a weekly seminar plus a minimum of 500 hours in a particular agency setting. *Prerequisites: Rehabilitation major, RHB 4410. Practicum site must be approved by instructor during RHB 4410.*

RHB 4450 Senior Seminar (2)
The impact of recent changes in federal and state legislation and the role and function of professional organizations and their positions on current issues. *Prerequisite: HS/RHB major with senior standing or permission of instructor.*

RHB 9920 Youth Leadership Forum Practicum (3)
The goal of the Youth Leadership Forum (YLF) is to develop a network of young adults with disabilities who realize their ability to pursue meaningful employment and societal contributions, while helping break down the barriers to independence for people with disabilities. Students taking RHB 9920 serve as group leaders for YLF participants and organize and carry out group activities and participant events. Requires Pre-YLF leadership training during the spring semester and a commitment to live on campus with the YLF participants for approximately a week. *Prerequisite: Permission of instructor.*

RISK MANAGEMENT AND INSURANCE COURSES (RMI)

RMI 3335 Principles of Risk Management and Insurance (3)
An introduction to the legal principles underlying insurance, the basics of risk management, the application of risk management techniques to personal risk management problems, personal property and liability insurance contracts including the personal auto policy and the homeowner's package, insurance regulation, and the insurance marketplace.

RMI 3340 Surplus Lines and Reinsurance (3)
A study of the excess and surplus lines insurance markets as well as the reinsurance sector of the insurance industry. The course covers the formation and classification of these companies, their distribution systems, their regulation, their accounting procedures, and a comparison of these companies to admitted insurers. *Prerequisite: RMI 3335 or permission of department chair.*

RMI 3346 Life and Health Insurance (3)
Study of types of life insurance and annuity contracts and their uses; regulations of life and health insurers; development of financial plans utilizing life insurance products; Social Security; group and individual health insurance products including major medical, disability income and long-term care policies and analysis of the marketplace. *Prerequisite: RMI 3335 or permission of department chair.*

RMI 3348 Property and Liability Insurance (3)
The fundamentals of commercial property and liability insurance including contracts, rating, underwriting, regulation and financial analysis of insurers. *Prerequisite: RMI 3335 or permission of department chair.*

RMI 4409 Summer Internship (3)
The summer internship provides students with the opportunity to gain real-world insurance experience as a summer employee of an insurance company. Students are interviewed and selected by the individual insurance companies. See the RMI department for specific requirements.

RMI 4440 Corporate Risk Management (3)
A study of the analysis and treatment of the pure risks faced by the business organization. The course includes development of the risk management process, exploration of the use of various risk management techniques on identified exposures, and the application of the process and the techniques in a risk management case study. *Prerequisite: RMI 3335 or permission of department chair.*

RMI 4441 Insurance Ethics and Professionalism (3)
A detailed discussion of risk management and insurance with specific emphasis placed on each of the nine canons that form the Code of Professional Ethics. Topics include but are not limited to risk, risk management, risk assessment, control and financing, insurance markets and competition, legal foundations of insurance, and policy analysis. *Prerequisite: RMI 3355 or permission of department chair.*

RMI 4442 Insurance Operations (3)
This is the capstone course for students majoring in risk management and insurance. The focus of the course is the key operational activities of insurance organizations. The course specifically covers marketing and distribution systems, underwriting, principles of ratemaking, reinsurance, statutory accounting, and financial analysis. Each of the functional areas is discussed within the context of regulatory and public policy issues. This course requires a grade of C or better. *Prerequisite: Permission of instructor.*

RMI 4449 Risk Management and Insurance Seminar (3)
Focuses on current problems and issues in risk management and insurance. This is the capstone course in the Risk Management/Insurance curriculum and should be taken the senior year. The course will include communication, teamwork, and computer skills. *Prerequisite: RMI 3335 or permission of department chair.*

RMI 4460 Agency Management (3)
The Agency Management course is designed to teach the fundamentals of establishing and operating an insurance agency or brokerage. This is a project-oriented class wherein students develop mission statements, strategic plans, marketing plans, operating plans and time charts in the areas of forming the corporation, licensing, choosing a product mix, developing markets, planning technology, staffing, training, sales, handling claims, and other administrative functions. *Prerequisite: RMI 3335 or permission of department chair.*

RMI 4491-4492 Guided Independent Research (1-3 credit hours per course per semester.)
Additional information is indexed under Guided

Independent Research and Study. Note: This course may not be substituted for any required course.

RMI 4493-4494 Guided Independent Study (1-3 credit hours per course per semester)
Additional information is indexed under Guided Independent Research and Study. Note: This course may not be substituted for any required course.

RMI 4499 London Internship (3)
The London internship provide students with first-hand explosure to the center of the excess and surplus lines market, Lloyds. See the RMI department for specific requirements.

RUSSIAN COURSES (RUS)

RUS 1101 Introductory Russian I (3-3)
Introduction to the Russian language.

RUS 1102 Introductory Russian II (3-3)
Introduction to the Russian language. *Prerequisite: RUS 1101 or permission of instructor.*

RUS 2201 Intermediate Russian I (3-3)
Progressive development of basic language skills in Russian. *Prerequisite: RUS 1102 or permission of instructor.*

RUS 2202 Intermediate Russian II (3-3)
Progressive development of basic language skills in Russian. *Prerequisite: RUS 2201 or permission of instructor.*

SCIENCE COURSES (SCI)

SCI 2233 Physical Science (3)
Basic chemistry and physics for non-science majors. *Co-requisite: SCI L233. NOTE: Credit does not count toward a major in any science curriculum.*

SCI L233 Physical Science Laboratory (1)
Laboratory experiments in basic chemistry and physics. *Co-requisite: SCI 2233.*

SCI 2234 Earth and Space Science (3)
Basic astronomy and geology for non-science majors. *Co-requisite: SCI L234. NOTE: Credit does not count toward any major in the sciences.*

SCI L234 Earth and Space Science Laboratory (1)
Laboratory experiments in basic astronomy and geology. *Co-requisite: SCI 2234.*

SCI 3335 Physical Geology (3)
Constructive and destructive processes which alter the earth. *Co-requisite: SCI L335.*

SCI L335 Physical Geology Lab (1-2)
Laboratory studies of constructive and destructive processes which alter the earth. *Co-requisite: SCI 3335.*

SCI 3336 Principles of Astronomy (3)
Basic facts and theories related to astronomical phenomena. *Co-requisite: SCI L336.*

SCI L336 Observational Astronomy Laboratory (1)
Star and constellation identification and observations using the telescope. *Co-requisite: SCI 3336.*

SCI 3340 Marine Science (3)
A study of the physical properties and organisms of the marine environment. *Co-requisite: SCI L340.*

SCI L340 Marine Science Laboratory (1-2)
Laboratory study of the physical properties and organisms of the marine environment. *Co-requisite: SCI 3340.*

SCI 3350 Weather and Climate (3)
A study of the physical properties of weather and climate. *Co-requisite: SCI L350.*

SCI L350 Weather and Climate Laboratory (1-2)
Laboratory study of physical properties of weather and climate. *Co-requisite: SCI 3350.*

SCI 4403 Conservation (3)
The conservation of natural and human resources with emphasis on population expansion as the major element in a changing ecology.

SCI 4474 Internship in Science Education (9)
The Professional Internship Program is the culminating clinical field-based experience for students seeking certification in a teaching field. The Professional Internship Program provides the student with the opportunity to conduct classes and assume the role of a teacher while receiving supervision from a classroom teacher and a university supervisor for a period of one full semester. The student will demonstrate skills of the informed, reflective decision maker throughout the internship experience. *Prerequisite: Admission to TEP. Co-requisite: SED 4454.*

SCI 4481 Methods and Materials for the Secondary Teacher (3)
A survey of teaching methods and materials appropriate for teaching in the content areas for grades 6-12. Topics addressed will include teacher evaluation in the public schools, collaboration with special education teachers, and lesson planning formats. In addition, teaching methods, selections organization and use of biology/science materials for grades 6-12 will be covered in detail. A professional laboratory experience is included in this course. *Prerequisite: Admission to TEP.*

SCI 4491-4492 Guided Independent Research (1-4 credit hours per course per semester)
Additional information is indexed under Guided Independent Research and Study.

SCI 4493-4494 Guided Independent Research (1-4 credit hours per course per semester)
Additional information is indexed under Guided Independent Research and Study.

SECONDARY EDUCATION COURSES (SED)

SED 3346 Educational Assessment (3)
This course provides a study of measurement and evaluation techniques for the secondary and P-12 teacher. Emphasis will be placed on the selection, evaluation, administration, scoring and interpretation of selected measures of student performance, achievement and behavior. The student will demonstrate skills in utilizing measurement data to plan appropriate learning activities for students. *Prerequisite: Admission to TEP.*

SED 4400 Classroom Management (3)
This course is designed for all secondary and P-12 education majors. The purpose of this course is to establish a foundation of content and application relative to classroom management and discipline, emphasizing reflection, decision making, and integrated teaching/learning strategies. Methodologies utilized will include discussion, lecture, field experience, case studies, problem solving sessions, projects, and research.

SED 4454 Internship Seminar for Secondary Education (3)
This course provides seniors an opportunity during internship to examine broad educational issues and concerns, topics on the state and local levels and those of personal interest. The scope of the course ranges from juvenile law, classroom management, professionalism, professional development for teachers and other course topics. *Prerequisite: Admission to TEP. Co-requisite: SED Internship.*

SED 4474 Secondary Internship in Grades 6-12 (9)
The Professional Internship Program is the culminating clinical field-based experience for students seeking certification in a teaching field. The Professional Internship Program provides the student with the opportunity to conduct classes and assume the role of a teacher while receiving supervision from a classroom teacher and a university supervisor for a period of one full semester. The student will demonstrate skills of the informed, reflective decision maker throughout the internship experience. *Prerequisite: Admission to TEP. Co-requisite: SED 4454.*

SED 4481 Methods and Materials for the Secondary Teacher (3)
Teaching methods, selection, organization and use of materials and resources in the secondary school discipline(s). Observation and teaching experiences will be included. *Prerequisites: EDU 3310 and admission to TEP.*

SED 4491-4492 Guided Independent Research (1-3)
Undergraduate research with attention to critical evaluation of research techniques, methods and procedures. *Prerequisites: junior or senior standing with a minimum overall GPA of 3.0, permission of guiding professor, approval of department chairperson or dean. A written request is to be submitted to the department chairperson at least two weeks in advance of the term in which study is to be undertaken. May not be used to repeat a course for which a grade of D or below has been earned. Application forms are available in the Office of University Records. Guided independent research may be taken only in the applicant's major or minor field. Also see index for "Independent Study and Research."*

SED 4493-4494 Guided Independent Study (1-3)
Supervised study through field or laboratory projects, guided readings, creative endeavors or achievement of specific skills. *Prerequisites: junior or senior status, permission of guiding professor, approval of department chairperson and the dean. A written request is to be submitted to the department chairperson at least two weeks in advance of the term in which study is to be undertaken. May not be used to repeat a course for which a grade of D or below has been earned. Also see index for "Independent Study and Research."*

SOCIOLOGY COURSES (SOC)

SOC 2230 Social Problems in Contemporary Society (3)
An examination of conditions that are harmful to society. Topics include problems with social institutions, inequality, deviance, and social change.

SOC 2275 Introduction to Sociology (3)
Survey of basic sociological concepts and the effect of social phenomena on individuals, groups and institutions.

SOC 2290 Sociology of Marriage (3)
The social, psychological, legal and practical aspects of marriage, emphasizing the sociological perspective in an examination of major issues relating to marital success.

SOC 3300 Social Institutions (3)
An analysis of several major social institutions, their structural components, processes, and resultant problems. Group interrelations and social change will be emphasized.

SOC 3301 Social Change (3)
An examination of social changes precipitated by the invention, discovery, and diffusion of products and technologies as society moves into the 21st century. Technology-driven changes are explored within topics such as the restructuring of occupations and the workplace, threats to personal privacy, the emergence of virtual culture, the impact of the Internet on the concept of human interaction and ethical issues created by technological advancements.

SOC 3302 Sociology of Small Groups (3)
An analysis of theory and research relating to the structure, functions, and processes of small groups. The course will explore group formation, structure, cohesion, conformity, power, leadership, and communication.

SOC 3310 Minorities in U. S. Social Structure (3)
An analysis of the role of racial and cultural minorities in American society. Examines contributions of anthropology, sociology, and psychology to theories of minority/majority group relations.

SOC 3320 Work, Family, and Changing Sex Roles (3)
Focuses on the overlapping worlds of work and family, emphasizing how the interaction of family-related issues, economic issues, and political issues influence and are influenced by the changing sex roles of women and men in American society.

SOC 3323 Juvenile Delinquency (3)
An examination of social, economic, psychological, and physiological determinants of young people's behavior as it concerns family, community, and social worker.

SOC 3331 Family Relations (3)
Study of family, its origin, development, and problems affecting marital relations and happiness.

SOC 3332 Family Violence (3)
A course to provide students with an in-depth study of the problems of violence in families including spouse abuse, child abuse, elder abuse, and the dynamics and dangers of violent relationships. The study will examine the root causes of family violence and the devastating, multi-generational effects of violence on its victims and society. Students will study current societal responses to family violence including protection services, treatment programs, legal defense strategies, and current legislation.

SOC 3345 Criminology (3)
Study of crime and its causes and measurements. Topics include various explanations of criminal behavior, typology of crime, criminal justice system, and social relations to crime.

SOC 3350 Social Anthropology (3)
An investigation of a major sub-discipline of anthropology using primary readings from its founders and contemporary ethnographic research while using a social anthropological approach.

SOC 3356 Sociology of Aging (3)
Sociological examination of global social changes precipitated by the demographic phenomenon of the aging of U. S. society and other societies. Addresses the heterogeneity of the older population, their locations, perceptions, and constraints. Issues such as housing, transportation, health care, and death and dying are explored.

SOC 3357 Sociological Aspects of Human Sexuality (3)
An examination of the cultural and social components of sexuality including current perspectives on sexuality, sex research and theory, cross-cultural perspectives and sexual diversity, gender issues, sexual relationships, sexual orientations, pregnancy and parenthood, sexually transmitted diseases, sexual victimization, sexuality across the life span, and recent social changes affecting sexuality in society.

SOC 3380 Social Behavior (3)
Analysis of social behavior based on empirical research. *Prerequisites: junior or senior standing and six hours of psychology, ENG 1102, or permission of instructor. NOTE: May be taken for psychology or sociology credit, but not for both.*

SOC 4406 Urbanism (3)
Historical, physical, economic, and social evolutions of urbanized areas. Emphasis on contemporary urban problems with implications for policy and planning. *Prerequisite: Twelve hours of social science.*

SOC 4408 Rural America: Past and Present (3)
A study of rural society, its organization, agencies, institutions, population trends and composition, patterns of settlement, social processes and change in character. *Prerequisites: Twelve hours of social science.*

SOC 4409 Political Sociology (3)
An overview of politics and political systems from earliest times to the present with some emphasis on democratic systems in the U. S. and other modern countries. *Prerequisite: Junior standing.*

SOC 4411 Demography and Population Analysis (3)
Overview of sociological and demographic theories of the growth, decline, and movement of human populations. Focus is given to concepts, methods and techniques used in the social sciences to qualitatively and quantitatively examine the causes and consequences of global demographic change. *This course may be taken for geography credit.*

SOC 4412 Social Change (3)
An in-depth analysis of social and cultural change from earliest times to the present with an exposition of the forces of both change and conservation, including technology. *Prerequisite: Junior standing.*

SOC 4415 Correctional Systems and Practices (3)
An examination of the day-to-day operations and practices in modern correctional facilities in the local, state and federal systems.

SOC 4420 Sociological Theory (3)
Survey of sociological theory with emphasis on theorists, their works and contributions to modern sociological theory.

SOC 4421 Social Stratification (3)
This is an introduction to structures of social inequality. It surveys classical sociological theories of inequality and reviews current empirical data on stratification world wide. Students explore the impact of stratification on lifestyles, including such topics as family, educational opportunities, religious practices, status attainment, and social mobility.

SOC 4425 Intro to Survey Research (3)
An introduction to the foundations of social research and the major types of research methods employed in sociology. *Prerequisite: Twelve hours in the social sciences to include one course in statistics and one course in research.*

SOC 4430 Sociology of Religion (3)
Sociological analysis of religion, including the effect of religion on behavior and attitudes and the inter-institutional relationships between religion and other institutions within the U. S.

SOC 4433 The Community (3)
A comparative view of the social organization of communities having widely different economic, spatial and cultural bases, analyzing the structure and interrelationship between the community and other social institutions and organizations. *Prerequisite: Twelve hours of social science*.

SOC 4435 The Sociology of Complex Societies (3)
A history and analysis of complex organizations from early to modern times.

SOC 4436 Social Evolution: Anarchy to Democracy (3)
Social analysis of human history from bands to modern societies. *Prerequisite: Fifteen hours of social science.*

SOC 4440 Sociology and the Internet (3)
Provides an overview of using the Internet for social science research and practice. *Prerequisites: Nine hours of social science.*

SOC 4441 The Sociology of Logic and Emotion (3)
A study of the links between logic and emotions. *Prerequisite: Nine hours of social science.*

SOC 4456 Gerontology (3)
A survey of the aged in America, with emphasis on the psychosocial aspects of aging.

SOC 4459 Medical Sociology (3)
The sociological perspective applied to medicine. Topics include changing ideas of disease causation, the role of practitioners and patients, the institutional setting, differential delivery of health services, differential patterns of morbidity and mortality, and the politics of health.

SOC 4490 Internship in Sociology (3)
Applications of skills and knowledge of sociology in government agency, foundation, public service institution or similar situation under the supervision of a faculty member. *Prerequisite: Approval of the student's academic adviser and department chair.*

SOC 4491-4492 Guided Independent Research (1 to 3 credit hours per course per semester)
Undergraduate research with attention to critical evaluation of research techniques, methods and procedures. *Prerequisites: Junior or senior standing with a minimum overall GPA of 3.0, permission of guiding professor, approval of department chair or dean. A written request is to be submitted to the department chair at least two weeks in advance of the term in which the study is to be undertaken. May not be used to repeat a course for which a grade of D or below has been earned. Application forms are available in the office of University Records. Guided independent research may be taken only in the applicant's major or minor field. Also see index for "Independent Study and Research."*

SOC 4493-4494 Guided Independent Study (1 to 3 credit hours per course per semester)
Supervised study through field and laboratory projects, guided readings, creative endeavors or achievement of specific skills. *Prerequisites: Junior or senior standing, with a minimum overall GPA of 3.0, permission of guiding professor, approval of department chair or dean. A written request is to be submitted to the department chair at least two weeks in advance of the term in which the study is to be undertaken. May not be used to repeat a course for which a grade of D or below has been earned. Application forms are available in the office of University Records. Guided independent research may be taken only in the applicant's major or minor field. Also see index for "Independent Study and Research."*

SOC 4495 Selected Topics (3)
Designed as a vehicle for the exploration of topics of current interest within the major discipline of sociology.

SPECIAL EDUCATION COURSES (SPE) (COLLABORATIVE TEACHER)

SPE 3302 Introduction to Moderate/Severe Disabilities (3)
This course presents an overview of the social, emotional, physical, and learning characteristics of children and youth with moderate and severe disabilities. Emphasis is placed on information regarding the definition, prevalence, and etiology of moderate and severe disabilities as well as information pertaining to the classification, assessment, placement, instruction, and programming needs and services for individuals with moderate and severe disabilities. *Prerequisite: Admission to TEP.*

SPE 3303 Teaching Students with Mild Disabilities (6-12) (3)
This methods course for prospective special ed 6-12 collaborative teachers emphasizes methods and materials for adolescents with mild disabilities and

provides a cross-category focus. Moreover, methods such as cognitive learning strategies are examined in depth. *Prerequisites: SPE 3349 and Admission to TEP.*

SPE 3304 Teaching Students with Moderate/Severe Disabilities (6-12) (3)
This course emphasizes a variety of educational strategies for secondary students with moderate and severe disabilities. Special emphasis is placed on the post-secondary adjustment of students with complex needs. *Prerequisites: SPE 3302 and Admission to TEP.*

SPE 3305 Transition Planning (3)
This course emphasizes educational strategies that promote the post-school adjustment of students with disabilities. Special emphasis is placed on the legal foundation of transition and effective transition models. *Prerequisites: SPE 3303, 3304, 3340, and Admission to TEP.*

SPE 3306 Teaching Students with Mild Disabilities (3)
This course will focus on organizational procedures, universal design of curriculum, methods and techniques used in educating students with specific learning disabilities, mild mental retardation, emotional/behavioral disorders, and attention deficit/hyperactive disorders in grades kindergarten through six who are in need of academic and social learning support in the general education classroom or in a special education classroom. Emphasis will be placed on direct teaching, designing accommodations and adaptations to teaching materials and methods in an effort to assist the disabled learner in accessing the general education curriculum in both a resource room and/or an inclusive general education classroom. This course requires extensive work within the K-6 special education and general education classrooms of a public school. *Prerequisite: Admission to TEP.*

SPE 3307 Strategies Instruction (3)
This course bridges the gap between research and practice and extends knowledge of specific methods for teaching students K-6 with mild disabilities. The premise of this course is that strategic learning is critical for many students with mild disabilities in order that they may achieve academic success and function at the level of their potential. *Prerequisite: Admission to TEP.*

SPE 3309 Teaching Students with Moderate/Severe Disabilities (3)
This course emphasizes a variety of divergent strategies and resources that enhance the educational performance of students with moderate and severe disabilities. Special emphasis is placed on the design of a circle of care for students with complex needs. *Prerequisite: Admission to TEP.*

SPE 3330 Integrating Assistive Technology (2)
This course will provide an overview of computer-based technologies as they relate to the teaching and learning of all students, as well as the use of assistive technology to facilitate the successful integration of individuals with disabilities. Selection, modifications, and classroom use of technologies to improve or bypass physical, sensory, communicative, learning, and social limitations will be explored. *Prerequisite: Admission to TEP.*

SPE 3340 Diverse Learners (3)
This course is oriented toward identifying exceptional students and providing appropriate learning experiences in the classroom setting. This course is a survey of the nature and needs of exceptional children and an introduction to their educational programs.

SPE 3346 Assessment in Special Education (3)
The purpose of this course is to provide students with a comprehensive study of assessment of the exceptional student. This course emphasizes the underlying concepts of tests and measurement, formal and informal assessment, test administration, the interpretation and utilization of test information for identification and eligibility, and the interpretation and utilization of diagnostic results in educational intervention. *Prerequisite: Admission to TEP.*

SPE 3349 Introduction to Mild Disabilities (3)
A survey of the physical, sensory, communication, cognitive, and behavioral characteristics of students with mild disabilities (to include students with specific learning disabilities, mental retardation, and emotional disabilities) and the impact of these characteristics on learning, curriculum, program development, and needed services and support. *Prerequisite: Admission to TEP.*

SPE 3362 Policies and Procedures in Special Education (3)
This course is an advanced undergraduate course for prospective special education collaborative teachers K-6. This course outlines the legal responsibilities and role of the special education teacher in the procedures and services of special education. The assessment/program planning program is emphasized. *Prerequisite: Admission to TEP.*

SPE 4445 Educational Evaluation of Exceptional Children (3)
This course is designed to provide the pre-service teacher with knowledge and skills in the selection, evaluation, administration, scoring and interpretation of standardized instruments in the areas of academic achievement, diagnostic tests, adaptive behavior, and behavior rating scales. Students will demonstrate the utilization of test results for the development of an individualized education plan, individualized family service plan, and learning outcomes for the general education classroom. *Prerequisite: Admission to TEP.*

SPE 4454 Internship Seminar (3)
This course provides seniors an opportunity during internship to examine broad educational issues and concerns, topics on the state and local levels, and those of personal interest. The scope of the course ranges from juvenile law, classroom management, professionalism, professional development for

teachers, and other course topics. *Prerequisites: SPE 4465 and Admission to TEP.*

SPE 4460 Collaboration in Education Practices (3)
This course provides students with both the intrapersonal and interpersonal skills needed to effectively collaborate with other teachers, administrators, parents and agencies. *Prerequisite: Admission to TEP.*

SPE 4465 Collaborative Teacher (6-12) Internship (9)
The Professional Internship Program is the culminating clinical field-based experience for students seeking certification in a teaching field. The Professional Internship Program provides the student with the opportunity to conduct classes and assume the role of a teacher while receiving supervision from a classroom teacher and a University supervisor for a period of one full semester. The student will demonstrate skills of the innovative, informed, reflective decision-maker through the internship experience. *Prerequisite: SPE 4454 and Admission to TEP.*

SPE 4474 Collaborative Teacher K-6 Internship (9)
The Professional Internship Program is the culminating clinical field-based experience for students seeking certification in a teaching field. The Professional Internship Program provides the student with the opportunity to conduct classes and assume the role of a teacher while receiving supervision from a classroom teacher and a university supervisor for a period of one full semester. The student will demonstrate skills of the informed, reflective decision maker throughout the internship experience. *Prerequisite: Admission to TEP. Co-requisite: SPE 4454.*

SPE 4491-4492 Guided Independent Research (1-3)
Undergraduate research with attention to critical evaluation of research techniques, methods and procedures. *Prerequisites: junior or senior standing with a minimum overall GPA of 3.0, permission of guiding professor, approval of department chairperson or dean. A written request is to be submitted to the department chairperson at least two weeks in advance of the term in which study is to be undertaken. May not be used to repeat a course for which a grade of D or below has been earned. Application forms are available in the Office of University Records. Guided independent research may be taken only in the applicant's major or minor field. Also see index for "Independent Study and Research."*

SPE 4493-4494 Guided Independent Study (1-3)
Supervised study through field or laboratory projects, guided readings, creative endeavors or achievement of specific skills. *Prerequisites: junior or senior status, permission of guiding professor, approval of department chairperson and the dean. A written request is to be submitted to the department chairperson at least two weeks in advance of the term in which study is to be undertaken. May not be used to repeat a course for which a grade of D or below has been earned. Also see index for "Independent Study and Research."*

SPANISH COURSES (SPN)

Note: For additional information, see Placement in Academic Courses.

SPN 1141 Introductory Spanish I (3)
Introduction to the Spanish language and Hispanic cultures.

SPN 1142 Introductory Spanish II (3)
Introduction to the Spanish language and Hispanic cultures. *Prerequisite: SPN 1141 or permission of instructor.*

SPN 2241 Intermediate Spanish I (3)
A review of grammar and readings in Spanish literature and civilization. *Prerequisite: SPN 1142 or permission of instructor.*

SPN 2242 Intermediate Spanish II (3)
Reinforcement of grammatical skills, reading of simple Spanish prose and poetry, composition and conversation. *Prerequisite: SPN 2241 or permission of instructor.*

SPN 3332 Advanced Spanish I (3)
Advanced-level reading, intensive work on composition, comprehensive treatment of Spanish phonetics. *Prerequisite: SPN 2242 or permission of instructor.*

SPN 3333 Advanced Spanish II (3)
Advanced-level reading, intensive work on aural comprehension and practical conversation facility, continued development of composition skills. *Prerequisite: SPN 2242 or permission of instructor.*

SPN 3350 Hispanic Culture on Location I (3-TBA)
An in-depth presentation of Hispanic culture combining lectures, readings, films, audiotapes, discussions and intensive language practice on the Troy campus with on-site visit to an Hispanic environment. *Prerequisite: Permission of instructor.*

SPN 3357 Hispanic Culture on Location II (3-TBA)
An in-depth presentation of Hispanic culture combining lectures, readings, films, audiotapes, discussions and intensive language practice on the Troy campus with on-site visit to an Hispanic environment. *Prerequisite: Permission of instructor.*

SPN 4447 Readings in Hispanic Literature (3)
In-depth study of the works of a selected major author, period or genre in the literature of Spain or Spanish America. *Note*: *May be repeated for credit. Prerequisite: SPN 2242 or permission of instructor.*

SPN 4450 Hispanic Culture and Civilization (3)
A survey of the geography, history, cultural achievements, institutions and daily life of Spain and other Hispanic countries. May be repeated once for a total of six credit hours. *Prerequisite: SPN 2242 or permission of instructor.*

SPN 4491-4492 Guided Independent Research (1-3 credit hours per course per semester)
Additional information is indexed under Guided Independent Research and Study.

SPN 4493-4494 Guided Independent Study (1-3 credit hours per course per semester)
Additional information is indexed under Guided Independent Research and Study.

SOCIAL SCIENCE COURSES (SS)

SS 3375 Introduction to Social Science Inquiry (3)
Principles of pure and applied research for the social sciences. Special emphasis is given to the types of research methods employed by social scientists including survey techniques, field research, quasi-experimental designs and analytical procedures currently used in the social sciences. *Prerequisite: general studies math.*

SS 3376 Applications of Social Science Inquiry (3)
A detailed description of what social scientists do with the information they gather. Particular attention is given to descriptive and inferential statistics, the relationship between research and policy, evaluation research, and research ethics. *Prerequisite: general studies math.*

SS 4474 Internship in Secondary Social Science Education (9)
The Professional Internship Program is the culminating clinical field-based experience for students seeking certification in a teaching field. The Professional Internship Program provides the student with the opportunity to conduct classes and assume the role of a teacher while receiving supervision from a classroom teacher and a university supervisor for a period of one full semester. The student will demonstrate skills of the informed, reflective decision maker throughout the internship experience. *Prerequisite: Admission to TEP. Co-requisite: SED 4454.*

SS 4481 Methods and Materials for the Secondary Teacher (3)
A survey of teaching methods and materials appropriate for teaching in the content areas for grades 6-12. Topics addressed will include teacher evaluation in the public schools, collaboration with special education teachers, and lesson planning formats. In addition, teaching methods, selections organization and use of history/social science materials for grades 6-12 will be covered in detail. A professional laboratory experience is included in this course. *Prerequisite: Admission to TEP.*

SS 4498 Social Science Theory (3)
A survey of the major theorists in the social sciences, emphasizing those who made critical contributions influencing the several social science disciplines and contemporary theorists whose works have an interdisciplinary element.

SS 4499 Senior Seminar (3)
In this course, the senior-level social science student prepares for the transition to graduate school/career. The student explores himself/herself as a person and as a social scientists in an effort to choose a fulfilling career path. In addition to career exploration, students conduct a senior project in an area of interest consistent with their academic program.

SOCIAL WORK COURSES (SWK)

SWK 2250 Introduction to Social Work (3)
The student is introduced to the profession of social work. Class focuses on the knowledge, skills and values essential for effective practice. Each student will be provided an opportunity to have direct contact with a practicing social worker. *Prerequisite: HS 2230.*

SWK 2280 Social Work Research I (3)
Introduction to statistical analysis concepts and principles necessary for understanding research reports and for the interpretation of data. Use of microcomputer statistical programs in the analysis of univariate, bivariate, and multivariate data including parametric and non-parametric analysis techniques. Topics include descriptive techniques, averages and measures of variation, tests of statistical significance, correlation and regression, and analysis of variance. *Prerequisite: MTH 1110 or 1112 and IS 2241.*

SWK 2281 Social Work Research II (3)
Introduction to research methodology and process with emphasis placed on the evaluation of practice. Understanding and using the journal research article as a tool for selecting appropriate intervention. Skills are built in using electronic data bases and information retrieval systems and integrated with writing skills necessary to critically evaluate the usefulness of research studies in practice application. *Prerequisite: SWK 2280.*

SWK 3301 Children and Family Services (3)
Child welfare services from both the public and private sectors of social work practice will be assessed, emphasizing the availability and effectiveness of services for children and their families in the United States. The historical development of the child welfare movement will be examined.

SWK 3302 Social Service Resources (3)
Examination of social welfare services and institutions, public and private, to include historical development, philosophical basis, structure, and function.

SWK 3303 Crisis Intervention (3)
Case management techniques for dealing with crisis. Crisis theory, stress management, and time-limited intervention will be examined.

SWK 3304 Social Work Practice In Health Settings (3)
A survey of the use of professional social work in a variety of health care delivery settings. Exposure to basic medical terminology needed by social workers.

Overview of the social aspects of disease, illness, and disability.

SWK 3320 Human Behavior In the Social Environment II (3)
An examination of the social dynamics of discrimination and oppression and particularly how discriminatory and oppressive environments have potential for negatively affecting biopsychosocial growth and development.

SWK 3340 Social Policy and Planning (3)
Exploration of the social policy formulation process and the building of analysis skills in the evaluation of social policy and programs. The impact of political, economic, and social forces is a focal point and the process of incrementalism in implementation is examined. *Prerequisites: HS 2230 or permission of instructor.*

SWK 3390 Social Work with Individuals and Families (3)
The melding of the systems and developmental perspectives and the problem-solving approach as a basis for generalist social work practice with individual and family systems. Assessment, intervention, and evaluation skills are developed. *Prerequisite: Admission to the professional social work curriculum.*

SWK 4450 Senior Seminar (2)
The impact of recent changes in federal and state legislation and the role and function of professional organizations and their positions on current issues. *Prerequisite: HS/SWK major with senior standing or permission of instructor.*

SWK 4471 Social Work with Groups (3)
The student learns to identify group processes and use these in assessment and intervention with the group as a client system. Evaluation of practice is extended to group settings. *Prerequisite: SWK 3390. Co-requisite: SWK 4472.*

SWK 4472 Social Work with Organizations and Communities (3)
Assessment and intervention with the community or organization as a client system. Skill building in evaluation of one's own practice continues. *Prerequisite: SWK 3390. Co-requisite: SWK 4471.*

SWK 4480 Social Work Pre-Practicum (1)
Preparation for SWK 4481. *Co-requisite: SWK 4471 and SWK 4472.*

SWK 4481 Social Work Practicum (12)
Placement in a social service agency which provides the opportunity to practice and develop beginning professional social work skills under the joint supervision of a faculty and an agency supervisor. Includes a weekly seminar plus a minimum of 500 hours in a particular agency setting. *Prerequisites: Social work major in good standing, SWK 4480. Practicum site must be approved by instructor during SWK 4480.*

TROY UNIVERSITY COURSES (TROY)

TROY 1101 University Orientation (1-1)
The primary purpose of this course is to assist entering students in acquiring the necessary knowledge and skills to manage effectively the Troy University campus environment in order to maximize their potential for success at the University, in their careers, and throughout their lives. *Students on the Montgomery campus are required to pass the Reading Placement Test.*

TROY 1102 Career Exploration and Planning (2)
The primary purpose of this course is to assist students who are undecided in their educational and career plans to identify interests, skills and values, and to develop goals. It also serves to assist non-traditional students considering a career change.

TROY 1103 Study Skills (1)
The primary purpose of this course is to teach students the skills needed to succeed in college. Structured for freshmen and sophomores, the skills taught will also benefit returning adult learners and any student having academic difficulties.

TROY 1104 Informed Citizenship (1)
This course is designed to examine the role of academic scholarship and the intellectual, civic and interpersonal outcomes of higher education. Through the course, students will engage in a service learning project while studying and reflecting on readings and activities to promote critical thinking skills, civic engagement and student success. *Prerequisite and/or corequisite: TROY 1101, Membership in First Year Studies Program Learning Community*

TROY 3300 Career Preparation and Job Search Techniques (3)
The primary purpose of this course is to aid students in making a successful transition from college to career. It also serves to aid non-traditional students in career transition.