

## COURSE DESCRIPTIONS

### ACCOUNTING COURSES (ACT)

- 2291 Principles of Accounting I (3)**  
Modern financial accounting theory and practices applied to sole proprietorships, partnerships, and corporations.
- 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. *Prerequisite: ACT 2291.*
- 3391 Intermediate Accounting I (3)**  
Theory and applications of assets, liabilities, and owners' equity, revenues, expenses, and analytical process. *Prerequisite: ACT 2292.*
- 3392 Intermediate Accounting II (3)**  
Theory and applications of assets, liabilities, and owners' equity, pensions, leases, earnings per share, and analytical process. *Prerequisite: ACT 3391.*
- 3394 Governmental Accounting (3)**  
Municipal and governmental accounting; preparation and use of budgets, records, and statements. *Prerequisite: ACT 2292.*
- 3395 Managerial/Cost Accounting I (3)**  
Manufacturing and distribution cost accounting, material, labor and overhead costs in job order and process cost accounting. These courses must be taken in sequence. *Prerequisite: ACT 2292.*
- 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. *Prerequisite: ACT 2292.*
- 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. *Prerequisite: ACT 3392.*
- 4491 Advanced Accounting (3)**  
Theory and applications of accounting for business combinations, branches and segments, partnerships, and foreign currency transactions and translations. *Prerequisite: ACT 3392.*
- 4494 Income Tax Accounting I (3)**  
Principals and dictates of individual capital and taxation of individual income. *Prerequisite: ACT 2292.*

- 4495 Income Tax Accounting II (3)**  
Tax Laws and regulations for partnership, corporations, estates and fiduciaries. *Prerequisite: ACT 4494.*
- 4496 Managerial/Cost Accounting II (3)**  
Manufacturing and distribution cost accounting, material, labor and overhead costs in job order and process cost accounting. These courses must be taken in sequence. *Prerequisite: ACT 3395.*
- 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. *Prerequisite: ACT 3392.*
- 4498 Advanced Auditing (3)**  
Auditing theory and procedures as applied to transaction cycles, revenue cycles, expenditure cycles, and cash balances. This course covers EDP auditing as well as internal, operational, and governmental auditing. *Prerequisite: ACT 4497.*

### AEROSPACE COURSES (AS)

- 3312 Air Force Leadership Studies I (3)**  
A study of leadership and quality management fundamentals, professional knowledge, Air Force doctrine, leadership ethics, and communication skills required of an Air Force junior 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.
- L312 Leadership Laboratory I (1)**  
Leadership laboratory is mandatory for AFROTC cadets and it complements this course by providing cadets with advanced leadership experiences in officer-type activities thus giving students the opportunity to apply leadership and management principles of this course.
- 3313 Air Force Leadership Studies II (3)**  
A study of leadership and quality management fundamentals, professional knowledge, Air Force doctrine, leadership ethics, and communication skills required of an Air Force junior 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.
- L313 Leadership Laboratory II (1)**  
Leadership laboratory is mandatory for AFROTC cadets and it complements this course by providing cadets with advanced leadership experiences in officer-type activities thus giving students the opportunity to apply leadership and management principles of this course.

- 4412 National Security Affairs/Preparation for Active Duty I (3)**  
 A course that examines 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.
- L412 Leadership Laboratory I (1)**  
 Leadership laboratory is mandatory for AFROTC cadets and it complements this course by providing cadets with advanced leadership experiences, giving students the opportunity to apply the leadership and management principles of this course.
- 4413 National Security Affairs/Preparation for Active Duty II (3)**  
 A course that examines 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.
- L413 Leadership Laboratory II (1)**  
 Leadership laboratory is mandatory for AFROTC cadets, and it complements this course by providing cadets with advanced leadership experiences, giving students the opportunity to apply the leadership and management principles of this course.

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

- 3312 Field Techniques in Archaeology (3)**  
 Instruction in survey and excavation methods and techniques used in the discipline of archaeology.
- 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.
- 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.
- 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.
- 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.
- 3340 Language in Culture and Society (3-3)**  
 A sociological and anthropological examination of language from a descriptive, historical and social perspective.
- 3360 Magic, Witchcraft and Religion (3)**  
 An anthropological examination of the role of religion and the supernatural among traditional peoples.
- 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.
- 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.
- 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.
- 4410 High Civilizations of the Old World (3)**  
 An anthropological examination of the sociocultural systems that formed the foundations of pre-industrial high civilizations of the Old World and a survey of past cultures that achieved this degree of development.

- 4411 High Civilizations of the New World (3)**  
An anthropological examination of the sociocultural systems that formed the foundations of pre-industrial high civilizations of the New World and a survey of past cultures that achieved this degree of development.
- 4420 Forensic Osteology (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.
- 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 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.*
- 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.*
- 1145 Foundations of Form and Space (3-3)**  
Introduction to the principles, elements, and concepts of two-dimensional space.
- 1150 Foundations of Time and Space (3-3)**  
Introduction to the principles, elements, and concepts of three- and four-dimensional space.
- 2201 Introductory Drawing (3-3)**  
Introduction to drawing with emphasis on traditional rendering materials and techniques.
- 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.*
- 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, ART 2201 or ART 2210, and ART 2230.*
- 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.*
- 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.*
- 2210 e-Drawing (3-3)**  
Introduction to drawing with emphasis on developing rendering skills applied to digital technology.
- 2228 Photo Studio I (3-3)**  
Introduction to the fundamentals of black and white dark-room photography.
- 2230 Color and Technology (3-3)**  
Introduction to the principles and science of color and color applications in both colorant and digital environments.

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## ART AND DESIGN COURSES (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.*
- 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.*
- 2250 Survey of Art History I (3-3)**  
Survey of the history of art from antiquity through the Gothic period.
- 2251 Survey of Art History II (3-3)**  
Survey of the history of art from Renaissance through Realism.
- 3301 Life Drawing (3-3)**  
Drawing the human form with emphasis on rendering mood and expression while learning skeletal and muscular structure. *Prerequisite: ART 2201 or ART 2210.*

- 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.
- 3308 <<dti.troy>> 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.*
- 3310 <<dti.troy>> Time/Sound (3-3)**  
Exploration of graphic design applied to multimedia. Students will learn to produce presentations using type, imagery, and audio-visually. *Prerequisite: ART 3308.*
- 3315 <<dti.troy>> 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.*
- 3320 Ancient and Medieval Art (3-3)**  
Classical antiquity through the Gothic period.
- 3321 Renaissance and Baroque (3-3)**  
Northern and Southern Renaissance through the Baroque period.
- 3322 18th and 19th Century Art (3-3)**  
Classical, Realism, Romanticism, and Impressionism.
- 3323 20th Century Art (3-3)**  
Post-Impressionism to the present.
- 3324 <<dti.troy>> Paper/Screen (3-3)**  
Exploration of desktop web-based publishing. Production of content, research, imagery, and development of paper and web-based publications. *Prerequisite: ART 3308 or permission of department chairman.*
- 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.*
- 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.*
- 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.*
- 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.*
- 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*
- 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.
- 3355 Graphic Design History (3-3)**  
Survey of the history of graphic design from prehistoric visual communications to contemporary global issues.
- 3361 Integrating Art into the Curriculum (3-3)**  
Critical and experiential investigation of approaches for integrating visual art into the elementary curriculum. *Prerequisite: EDU 3300 and PSY 3300.*
- 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.
- 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.
- 4424 <<dti.troy>> 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.*
- 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.*
- 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.*
- 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.*

## ATHLETIC TRAINING EDUCATION COURSES (AT)

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- 4435 Collaborative Studio (3-3)**  
An integrative art studio experience joining students from each concentration area. Thematic, supervised exploration of a chosen medium. *Prerequisite: Must have completed the third level of an art studio concentration.*
- 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; Co-requisite: IED 4454 Internship Seminar for Interdisciplinary Education.*
- 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.*
- 4491 Guided Independent Research (1 to 3 credits per course per semester)**  
Additional information is indexed under Guided Independent Research and Study.
- 4492 Guided Independent Research (1 to 3 credits per course per semester)**  
Additional information is indexed under Guided Independent Research and Study.
- 4493 Guided Independent Study (1 to 3 credits per course per semester)**  
Additional information is indexed under Guided Independent Research and Study.
- 4494 Guided Independent Study (1 to 3 credits per course per semester)**  
Additional information is indexed under Guided Independent Research and Study.
- 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.
- 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.
- 1101 Orientation to Athletic Training Education (1-1)**  
Acquaints the Pre-Athletic Training Education student with the six cognitive domains of athletic training education and the athletic training education competencies.
- 2201 Clinical Experiences in Athletic Training (1-3)**  
Acquaints the entry-level athletic training student with athletic training educational competencies in the clinical proficiencies in Athletic Emergency Plan (EAP), CPRO, basic life support techniques, use of crutches and canes, use of immobilizing devices, universal precautions, OSHA guidelines, wound care, vital signs and the knowledge of hospital and clinical settings. Clinical hours will not exceed 10 hours per week. *Prerequisite: Acceptance into ATEP (first-year status).*
- 2202 Clinical Experiences in Athletic Training (1-3)**  
Acquaints the entry-level athletic training student with athletic training educational competencies and clinical proficiencies in anthropometric measurement, appropriate examinations, screening procedures, environmental conditions, record keeping, prevention and protective taping and bracing, and the standard operations and procedures of an athletic training room. Clinical hours will not exceed 10 hours per week. *Prerequisites: AT 3395, L395, AT 3396, L396, AT 2201 (first-year status).*
- 3301 Clinical Experiences in Athletic Training (1-3)**  
Acquaints the entry-level athletic training student with athletic training education competencies in the clinical proficiencies as they relate to the use of therapeutic modalities. Clinical hours will not exceed 10 hours per week. *Co-requisite: AT 4447 (second-year status).*
- 3302 Clinical Experiences in Athletic Training (1-3)**  
Acquaints the entry-level athletic training student with athletic training education competencies in the clinical proficiencies as they relate to the use of therapeutic exercise. Clinical hours will not exceed 10 hours per week. *Prerequisites: AT 4447, 3301. Co-requisite: AT 4448 (second-year status).*
- 3360 Principles of Drug Therapy for Athletic Trainers (2-2)**  
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.*
- 3395 Care and Prevention of Athletic Injuries and illnesses I (3-3)**  
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 (first-year status).*

- L395 Care and Prevention of Athletic Injuries and Illnesses I Clinical Experiences (1-1)**  
 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 (first-year status).*
- 3396 Evaluation of Athletic Injuries and Illnesses I (3-3)**  
 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 (first-year status).*
- L396 Evaluation of Athletic Injuries and Illnesses I Clinical Experiences (1-1)**  
 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 (first-year status).*
- 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 (first-year status).*
- L397 Evaluation of Athletic Injuries and Illnesses II Clinical Experiences (1-1)**  
 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 (first-year status).*
- 4447 Therapeutic Modalities (2-2)**  
 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 (second-year status).*
- 4448 Therapeutic Exercises (2-2)**  
 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 (second-year status).*
- 4401 Clinical Experiences in Athletic Training (2-3)**  
 Acquaints the entry-level athletic training student with athletic training educational competencies in the clinical proficiencies as they relate to pharmaceutical products, poison control services, administration of bronchodilators and epinephrine, and recognition of the signs, symptoms and predisposing conditions associated with general medical diseases and conditions. Clinical hours will not exceed 20 hours per week. *Co-requisite: AT 3349 (third-year status).*

- 4402 Athletic Training Field Experience (12-12)**  
 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.*

**BIOLOGY COURSES (BIO)**

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- 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.*
- L100 Principles of Biology Lab (1-2)**  
 Measurements, microscopy, ecology, cell structure, bioenergetics, cell reproduction, and heredity. *Co-requisite: BIO 1100.*
- 1101 Organismal Biology (3)**  
 Biological concepts and life processes of protists, fungi, plants, and animals. *Prerequisites: BIO 1100, L100. Co-requisite: BIO L101.*
- 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.*
- 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.*
- 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.*
- 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.*
- 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.*
- 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.

- 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.
- 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.
- 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.
- L307 Invertebrate Zoology Lab (1-3)**  
Anatomy, classification, and life histories of invertebrates. *Prerequisites:* BIO 1101, L101. *Co-requisite:* BIO 3307.
- 3308 Vertebrate Zoology (3)**  
Taxonomy, structure, life histories, behavior, and distribution of vertebrates. *Prerequisites:* BIO 1101, L101. *Co-requisite:* BIO L308.
- L308 Vertebrate Zoology Lab (1-3)**  
Taxonomy, structure, life histories, and behavior of vertebrates. *Prerequisites:* BIO 1101, L101. *Co-requisite:* BIO 3308.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.

- 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.*
- 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.*
- 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.*
- 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.*
- 4405 Entomology (3)**  
Orders of insects with the emphasis on morphology, taxonomy, and life cycles. *Prerequisites: BIO 1101, L101. Co-requisite: BIO L405.*
- L405 Entomology Lab (1-3)**  
Morphology, classification, and identification of insects. A collection is required. *Prerequisites: BIO 1101, L101. Co-requisite: BIO 4405.*
- 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.*
- L410 Animal Behavior Lab (1-3)**  
Experimental and observational techniques in behavior. *Prerequisites: BIO 3320, L320. Co-requisite: BIO 4410.*
- 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.*
- 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.*
- 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.*
- 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.*
- 4416 Environmental Microbiology (3)**  
The taxonomy, diversity, and ecology of microbial populations in ecosystems, with the emphasis on the roles that 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.*
- L416 Environmental Microbiology Lab (1-3)**  
Environmental microbiological laboratory techniques including isolation, identification, and enumeration of microorganisms from aquatic and terrestrial environments. *Prerequisites: BIO 3372, L372, CHM 3342, L342. Co-requisite: BIO 4416.*
- 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.*
- 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.*
- 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.*
- 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.*
- 4428 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.*
- L428 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.*

- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 4445 Ichthyology (3)**  
Morphology, anatomy, physiology, taxonomy, life histories, distribution, and adaptations of fishes. *Prerequisites:* BIO 1101, L101, 2229, L229. *Co-requisite:* BIO L445.
- 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.
- 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.
- L446 Herpetology Lab (1-3)**  
Structural features, identification, and classification of amphibians and reptiles. *Prerequisites:* BIO 1101, L101, 2229, L229. *Co-requisite:* BIO 4446.
- 4447 Ornithology (3)**  
Morphology, anatomy, physiology, taxonomy, life histories, distribution, and adaptations of birds. *Prerequisites:* BIO 1101, L101, 2229, L229. *Co-requisite:* BIO L447.
- L447 Ornithology Lab (1-3)**  
Structural features, identification, and classification of birds. *Prerequisites:* BIO 1101, L101, 2229, L229. *Co-requisite:* BIO 4447.
- 4448 Mammalogy (3)**  
Morphology, anatomy, physiology, taxonomy, life histories, distribution, and adaptations of mammals. *Prerequisites:* BIO 1101, L101, 2229, L229. *Co-requisite:* BIO L448.
- L448 Mammalogy Lab (1-3)**  
Structural features, identification, and classification of mammals. *Prerequisites:* BIO 1101, L101, 2229, L229. *Co-requisite:* BIO 4448.
- 4451 Toxicology (3)**  
Principles related to the adverse effects of chemicals on living organisms. *Prerequisites:* CHM 3342, L342. *Co-requisite:* BIO L451.
- L451 Toxicology Lab (1-3)**  
Assessment of the toxicity of chemical agents following standard protocols. *Prerequisites:* CHM 3342, L342. *Co-requisite:* BIO 4451.
- 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.
- 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.
- 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.
- 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.
- 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.

- 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.*
- 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.*
- 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.*
- 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.*
- 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.*
- 4480 Histology (3)**  
Microscopic anatomy and function of cell types and tissues of mammalian organs. *Prerequisites: BIO 1101, L101. Co-requisite: BIO L480.*
- L480 Histology Lab (1-3)**  
Microscopic anatomy of cell types and tissues of mammalian organs. *Prerequisites: BIO 1101, L101. Co-requisite: BIO 4480.*
- 4481 Methods and Materials for the Secondary Teacher(4)**  
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.

- 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.*
- 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.*
- 4488 Internship in Environmental Science (1 to 3 credit hours per BIO 4489 course per semester)**  
BIO 4490 Supervised work experience in a governmental agency, business or industry, public service organization, or other working environment in which a student will apply knowledge of environmental science. *Prerequisites: Approval of the student's academic adviser and department chair.*
- 4491 Guided Independent Research (1 to 4 credit hours per BIO 4492 semester)**  
Additional information is indexed under Guided Independent Research and Study.
- 4493 Guided Independent Study (1 to 4 credit hours per BIO 4494 semester)**  
Additional information is indexed under Guided Independent Research and Study.

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**BUSINESS COURSES (BUS)**

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- 1101 Introduction to Business (3)**  
Modern business communications including mechanics and content of letters and reports. *For business minors or non-business majors only. Prerequisite: ENG 1102 or 1104.*
- 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.*
- 4460 Business Consulting and Research (3)**  
Small business research and problem-solving with related field experience. *Prerequisite: Permission of the instructor.*
- 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.

**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.*

**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.*

### **CHEMISTRY COURSES (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.*

**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.*

**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.*

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

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

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

**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.*

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

**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.*

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

**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.*

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

**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.*

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

**3357 Biochemistry I (3)**  
Physical and chemical properties of proteins, nucleic acids, fatty acids, and carbohydrates with emphasis on the relationship between chemical structure and biological function. *Prerequisite: CHM 3343. Co-requisite: CHM L357.*

**L357 Biochemistry Laboratory (1 - 3)**  
Laboratory experiments emphasizing the biochemical techniques used in isolation and characterization of macromolecules. *Co-requisite: CHM 3357.*

**3358 Biochemistry II (3)**  
Catabolism and anabolism of carbohydrates, fatty acids, and amino acids with emphasis on regulation and the major metabolic pathways, including glycolysis, citric acid cycle, electron transport, gluconeogenesis, and pentose phosphate. *Prerequisite: CHM 3357.*

**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 L452.*

**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.*

- 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.*
- 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.*
- 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.*
- 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.*
- 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.*
- 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 bag and Schlenk line. *Co-requisite or prerequisite: CHM 4444.*
- 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.*
- 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.*
- 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.*
- 4481 Methods and Materials for the Secondary Teacher (4)**  
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.
- 4491/2 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.
- 4493/4 Guided Independent Study (1 - 3 credit hours per course per semester)**  
Additional information is listed under Independent Research and Study in the section on Academic Regulations.
- 4499 Senior Seminar (1 - 3)**  
Principles of preparing and presenting an oral presentation on a selected chemical topic in the current literature.

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### CLASSICS COURSES (CLA)

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- 2260 Classical Mythology (3)**  
Myths of the Greeks and Romans and their influence.
- 2290 Classical Literature in English Translation (3)**
- 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.
- 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.
- 3330 Classical Epic (3)**  
Homer's *Iliad* and *Odyssey*, Virgil's *Aeneid*, and the epic tradition.
- 3350 Classical Drama (3)**  
The ancient theatre and its influence with selected plays by Greek and Roman playwrights.
- 4400 Selected Topics in Classics (3)**  
Selected topics in classical studies generally not covered in other courses. Note: May be repeated once for credit.

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

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

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

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

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### COMMUNICATION COURSE (COM)

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**1110 Effective Communication (3)**  
Practice in both oral and written communications. Focuses on improvement and development of present listening, speaking, reading and writing abilities and their applications in both academic and professional settings. *Prerequisite: placement.*

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### COMPUTER SCIENCE COURSES (CS)

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**2244 Computer Programming I (3)**  
An introduction to a programming language. Programming fundamentals include program structure, assignment, data types, repetition, input/output, flow of control, and functions. Program design development and testing is emphasized. *Prerequisite: MTH 1112.*

**2260 Computer Programming II**  
A continuation of Computer Science I to include advanced programming techniques including application of arrays and advanced input/output. Students design, implement, and test a number of moderately large programs. *Prerequisites: CS 2244 and MTH 1125 or 2201.*

**2261 Foundations of Computer Science Concepts (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. *Prerequisite: CS 2244.*

**2262 Business Systems Programming (3)**  
The study and application of a business-oriented programming language. Students apply a structured, multi-phase program development process that features a series of steps involving understanding of problems, formal problem definition, design methodologies, program specification, breakdown, and files. Topics include file processing, data validation, table handling, calculations, input/output techniques, and report writing as practiced

in the application of computers to business data processing. *Prerequisite: CS 2260.*

**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 2260.*

**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 2260, MTH 2215.*

**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: CS 3313, MTH 1126.*

**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.*

**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 2260 and MTH 2215.*

**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.*

**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.*

**3339 Fundamentals of Object-Oriented Programming (3)**  
The conceptual framework for object-oriented programming and systems. Topics include classes, data hiding,

- modularity, inheritance, and reusable code. They are presented through the use of some object-oriented language. *Prerequisite: CS 3323.*
- 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 2260.*
- 3357 Logical Structures of Computer Design(3)**  
Boolean algebra and design and minimization of combinatorial and sequential circuits. This course includes laboratories that demonstrate how simple circuits are designed and what problems may be encountered in design, such as hazards and race conditions. *Prerequisites: CS 2261, MTH 2215.*
- 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 3357.*
- 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..*
- 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 3370.*
- 4401 Special Topics in 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.*
- 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.*
- 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 4420.*
- 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 3325 or CS 3330.*
- 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.*
- 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. *Prerequisites: CS 4445 and CS 3323 or 3330.*
- 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.*
- 4451 Computer Security and Reliability (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 4448 recommended.*
- 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 3323 or CS 3330.*
- 4462 Special Topics in Object-Oriented Programming (3)**  
This course is a continuation of CS 3339. It presents the conceptual framework for the design of object-oriented

systems. Topics include re-factoring designs and design patterns, presented through the use of some object-oriented language. *Prerequisite: CS 3339.*

- 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.*

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### CRIMINAL JUSTICE COURSES (CJ)

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- 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.*
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.*
- 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.*
- 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.
- 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.

- 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.
- 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.)
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.

- 4470 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.
- 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 on-line and computer-related criminal conduct. The course will examine the evolution of criminal law relative to the development of new technology.
- 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.
- 4491-4492 Guided Independent Research ( 1 to 3 credit hours per course per semester)**  
Additional information is indexed under Guided Independent Research and Study.
- 4493-4494 Guided Independent Study (1 to 3 credit hours per course semester)**  
Additional information is indexed under Guided Independent Research and Study.
- 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.

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**DRAMATIC ARTS COURSES (DRA)**

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

- 2221 Technical Theatre (2-3)**  
A study of standard technical practices and equipment for the theatre.
- 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.
- 3301 Acting I (2-3)**  
A study of basic principles, terminology, and disciplines of the actor, including relaxation, concentration, movement, and characterization.
- 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.
- 3303 Makeup Techniques (1-2)**  
A study of the theory and techniques of stage make-up. Includes makeup for theatre, film, and video.
- 3304 Lighting Techniques (2-3)**  
A study of stage lighting equipment and lighting practices.
- 3310 Communication Arts Seminar (1-1)**  
An introduction to the methods of designing, researching, and reporting the solutions to rhetorical and theatrical design/technology or acting/directing problems, development of public speaking/forensics presentations or critical analyses of language arts subjects. Includes focus on standards of professional communication and fine arts organizations as well as graduate and/or professional school opportunities. Also includes requirement for completion of 20 attendance credits at communication and fine arts events that may be earned during the first two years of enrollment. Special arrangements through department evaluation for transfer students.
- 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.
- 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 SPH 2251 or permission of instructor.
- 3321 Scenic Design (3-3)**  
The principles and techniques of drafting and designing in a variety of theatrical spaces. *Prerequisite:* DRA 2221 and completion of the DRA 2245 rotation or permission of the instructor.
- 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.
- 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.
- 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.
- 3350 Script Analysis (2-2)**  
Script Analysis is a course focusing 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.
- 3352 Sound Techniques (2-2)**  
A study of digital and analog recording techniques, recording equipment, and application.
- 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.
- 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.
- 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
- 4451 Directing I (3-3)**  
Script analysis and directing principles with studies in the direction of scenes from contemporary plays. *Prerequisite:* DRA 3301.
- 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.

**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, and complete a program assessment. 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.

**4491-92 Guided Independent Research (1-3 credit hours per course)**  
 Information is indexed under Independent Research and Study in the Bulletin.

**4493-94 Guided Independent Study (1-3 credit hours per course)**  
 Information is indexed under Independent Research and Study in the Bulletin.

**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.

**EARLY CHILDHOOD EDUCATION COURSES  
 (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).*

**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.*

**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.*

**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.*

**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.*

**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.*

**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.*

**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.*

**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.*

**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.*

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

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### ECONOMICS COURSES (ECO)

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- 2251 Principles of Macroeconomics (3)**  
Macroeconomic theory of the national economy with emphasis on income, employment, banking, and public policy.
- 2252 Principles of Microeconomics (3)**  
Microeconomic theories of value, production, distribution of income, and basic international economic analysis.
- 2270 Personal Finance and Economics (3)**  
Business economics and personal finance in modern society.
- 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.*
- 3355 Labor Economics (3)**  
Employment, unionism, labor-management relations and human capital. *Prerequisite: ECO 2252.*
- 3357 Managerial Economics (3)**  
Theory and determination of prices. *Prerequisite: ECO 2252.*
- 3358 Macroeconomics for Managers (3)**  
An analysis of economic growth, income, employment and price levels. *Prerequisite: ECO 2252.*
- 4451 International Trade (3)**  
Principles underlying international trade and international finance. *Prerequisite: ECO 2252.*
- 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.*
- 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 21<sup>st</sup> century. *Prerequisite: ECO 2251 or ECO 2252.*

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

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### EDUCATION COURSES (EDU)

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- 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.
- 3310 The Professional Educator**  
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.*
- 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.
- 4471 Curriculum and Instructional Delivery**  
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.*
- 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. Co-requisite: ELE 4454.*
- 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.*

**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.*

**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.

**9914**     **Environmental Science: Project WET (1)**  
Project WET (Water Education for Teachers) is an interdisciplinary, supplementary environmental and conservation education program. The goal of Project WET is to facilitate and promote awareness, appreciation, knowledge, and stewardship of water resources.

**9915**     **Environmental Science: Aquatic WILD (1)**  
Aquatic Project WILD is an interdisciplinary, supplementary environmental and conservation education program that explores the fascinating worlds of water and aquatic habitats they support.

**9920**     **Youth with Disabilities Leadership Forum (3)**  
This course is designed for education and human services students. The purpose of this course is to provide field experience with youth with disabilities. Students will serve as counselors who conduct activities, guide discussion groups, and provide feedback and evaluation. *Prerequisite: permission of the instructor.*

**9932**     **Environmental Science: Project WILD (1)**  
Project WILD is an interdisciplinary, supplementary environmental and conservation education program emphasizing wildlife. Project WILD emphasizes the intrinsic, ecological, and other values of wildlife, as well as the importance of wildlife as a basis for understanding the fragile grounds upon which all life rests.

**9934**     **Environmental Science: Project Learning Tree (1)**  
Project Learning Tree (PLT) is an interdisciplinary, supplementary environmental and conservation education program emphasizing forestry and related resources. PLT offers opportunities for learners to develop awareness, knowledge, and skills necessary for living in harmony with the world of living and non-living things.

## ELEMENTARY EDUCATION COURSES (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.*

**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.*

**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.*

**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.*

**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.*

**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.*

**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.*

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.*

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**ENGLISH COURSES (ENG)**


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| 1100 | <b>Preparatory English (3)</b><br>Developmental instruction focusing on mastering rules of English grammar and composition and developing skills needed to write clear, effective sentences. Involves application of appropriate computer software and variety of written activities. Students who do not pass the English placement essay will be placed in this course. Depending upon the campus at which the course is taken, the student may be required to attend weekly sessions at a writing and/or Computer Center. <i>NOTE: This course will not substitute for any General Studies requirement and will not be used in meeting minimum degree requirements. Minimum grade of C required for credit.</i> | 1150 | <b>Basic Study Techniques (1)</b><br>Presentation of and practice in basic study techniques, including strategies for planning personal success, outlining materials, studying for tests, and taking tests.   |
| 1101 | <b>Composition And Modern English I (3)</b><br>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. <i>Prerequisite: Placement Testing.</i>  | 2205 | <b>World Literature I (3)</b><br>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. <i>Prerequisite: ENG 1102 or equivalent</i> |
| 1102 | <b>Composition and Modern English II (3)</b><br>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. <i>Prerequisite: ENG 1101 or equivalent</i>  | 2206 | <b>World Literature II(3)</b><br>Introduction to attitudes, philosophies, and reflections of life in world literary masterpieces from the Enlightenment to the present. Requires demonstration of acceptable writing skills. <i>Prerequisite: ENG 1102 or equivalent</i>                |
| 1103 | <b>Honors English Composition I (3)</b><br>Introductory study and practice of composition for the superior student. <i>(prerequisite: Minimum English score of 27 on the ACT or 640 on the SAT, or recommendation by an 1101 instructor</i>  | 2207 | <b>Honors World Literature I (3)</b><br>A course for the superior student, focusing on representative selections of the world's dramatic masterpieces in prose and poetry. <i>Prerequisite: ENG 1104 or permission of department chair</i>  |
| 1104 | <b>Honors English Composition II (3)</b><br>Continuation of study and practice of composition for the superior student. <i>Prerequisite: Minimum grade of C in ENG 1103 or recommendation by a 1101 or 1102 instructor</i>   | 2208 | <b>Honors World Literature II (3)</b><br>A course for the superior student, focusing on representative selections of the fictional masterpieces in Western literature. <i>Prerequisite: ENG 1104 or permission of department chair</i>  |
|      |  | 2210 | <b>Word Origins and Usage (2)</b><br>Discussion of principal ways by which words enter English language. Emphasizes learning prefixes, roots, and suffixes. Requires memorizing much material.  |
|      |  | 2211 | <b>American Literature I (3)</b><br>Study of works of selected writers in various American traditions and styles from colonial times to the Civil War. <i>Prerequisite: ENG 1102 or equivalent</i>  |
|      |  | 2212 | <b>American Literature II (3)</b><br>Study of works of selected writers in various American traditions and styles from 1860 to the present. <i>Prerequisite: ENG 1102 or equivalent</i>   |
|      |  | 2219 | <b>Literature and Scholarship (2)</b><br>Philosophy and practice of literary scholarship, including basic tools and methods of literary research.   |
|      |  | 2225 | <b>Thematic Approaches to Literature (3)</b><br>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. <i>Prerequisite: ENG 1102 or equivalent</i>                     |
|      |  | 2244 | <b>British Literature I (3)</b><br>A survey of British literature from its beginning to the eighteenth century. <i>Prerequisite: ENG 1102 or equivalent</i>   |
|      |  | 2245 | <b>British Literature II (3)</b><br>A survey of British literature from the nineteenth century to the present. <i>Prerequisite: ENG 1102 or equivalent</i>  |

- 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.*
- 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*
- 3301 Women's Literature (3)**  
 Representative works of literature by women. *Prerequisite: 6 semester hours of 2000-level English courses*
- 3303 Writing across the Disciplines (3)**  
 An advanced study of writing expository, non-fiction 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*
- 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*
- 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*
- 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*
- 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*
- 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*
- 3341 Advanced Grammar (3)**  
 Detailed study of the structural system of English grammar. *Prerequisite: 6 semester hours of 2000-level English courses*
- 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. to technical and scientific documents such as reports, proposals, and user manuals. *Prerequisite: ENG 2260.*
- 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*
- 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*
- 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*
- 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*
- 3355 Verse Writing (3)**  
 Development of techniques in the practice of poetry, including expression through metrical patterns, rhyme, rhythm, imagism, metaphor, and symbolism. *Prerequisite: 6 semester hours of 2000-level English courses; ENG 3351 or permission of instructor*
- 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*
- 3357 Form and Theory of Nonfiction Literature (3)**  
 Examination of the theories behind various forms of non-fiction 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*

- 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.*
- 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*
- 3365 Advanced Technical and Professional Writing (3)**  
Study of technical communication as a dynamic process in organizational and social environments. on the manner in which organizational hierarchies, purposes, and stylistic conventions interact with the writing process. of professional literature and professional associations concerned with improving communications within students' disciplines. *Prerequisite: ENG 2260.*
- 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.*
- 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*
- 4313 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*
- 4314 British Culture on Location (3)**  
An intensive presentation of British culture on-site in London, Oxford, and other important British locations.
- 4342 Advanced Writing (3)**  
Preparation for teaching English composition and opportunity to practice writing skills and techniques at the advanced level. Involves grading freshman essays provided by instructors of ENG 1101 and comparing evaluations. Requires writing several essays illustrating various modes of exposition and argumentation. *Prerequisite: 6 semester hours of 2000-level English courses*
- 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*
- 4401 Chaucer (3)**  
Study of Chaucer's major poetry. *Prerequisite: 6 semester hours of 2000-level English courses*
- 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*
- 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*
- 4404 Milton (3)**  
Milton's poetry and major prose. *Prerequisite: 6 semester hours of 2000-level English courses*
- 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*
- 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*
- 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*
- 4413 Studies in Nineteenth-Century British Literature (3)**  
Study of Romantic and/or Victorian literatures. *Prerequisite: 6 semester hours of 2000 level English courses*
- 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*
- 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*
- 4416 Nineteenth-Century American Novel (3)**  
Study of representative American novels of the 19th century. *Prerequisite: 6 semester hours of 2000-level English courses*
- 4417 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 produc-

- tions 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.*
- 4418 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.*
- 4421 English Novel (3)**  
Selected 18th, 19th, and 20th century novels written in English. *Prerequisite: 6 semester hours of 2000-level English courses*
- 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*
- 4426 Modern Poetry (3)**  
Study of 20th- and 21st-century poetry. *Prerequisite: 6 semester hours of 2000-level English courses*
- 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*
- 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*
- 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*
- 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*
- 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*
- 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*
- 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*
- 4443 Southern Writers (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*
- 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*
- 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*
- 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*
- 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*
- 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*
- 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. Co-requisite: SED 4454.*
- 4481 Methods and Materials for the Secondary Teacher (4)**  
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	<b>3336</b>	<b>Real Estate Finance I (3)</b> Procedures and operations of real estate mortgage markets. <i>Prerequisite: FIN 3332.</i>
<b>4488</b>	<b>Seminar in Professional Writing Portfolio Development (3)</b> Senior seminar. and development of a professional portfolio containing carefully selected materials that demonstrate seniors' mastery of specific writing capabilities and skills. <i>Prerequisite: senior class standing, ENG 2260, and completion of at least three required courses and three electives in the major.</i>	<b>3337</b>	<b>Personal Financial Planning (3)</b> Introduction and comprehensive overview of personal financial planning. Topics include introduction to financial planning, managing assets, credit, insurance, investments, retirement and estate planning. <i>Prerequisite: FIN 3332.</i>
<b>4489</b>	<b>Internship (3)</b> Practical experience involving writing and editing skills while working under the supervision of the Alabama Literary Review staff. <i>Prerequisite: ENG 3352-3353 or permission of instructor</i>	<b>4419</b>	<b>Speculative Markets (3)</b> 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. <i>Prerequisite: FIN 3332.</i>
<b>4490</b>	<b>Professional Writing Internship (3)</b> Writing Practicum/Internship at a local industry, publisher, arts or public agency. of experiences and problems in the writing practicum/internship. of professional writing practices and demands, including those of career preparation and development. <i>Prerequisite: ENG 2260, and completion of at least three required courses and three electives in the major</i>	<b>4431</b>	<b>Financial Management (3)</b> 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. <i>Prerequisite: FIN 3332.</i>
<b>4491-94</b>	<b>Guided Independent Research and Study (3)</b> Thorough examination of material on a selected subject, requiring a documented research paper. Additional information indexed under "Guided Independent Research and Study." <i>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.</i>	<b>4432</b>	<b>Investments (3)</b> Financial analysis of investments, including markets, institutions, and instruments with emphasis on security analysis, portfolio analysis, and financial planning. <i>Prerequisite: FIN 3332.</i>
<b>4495</b>	<b>Senior Seminar in English (3)</b> 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. <i>Prerequisite: Senior status.</i>	<b>4434</b>	<b>Financial Modeling (3)</b> 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. <i>Prerequisite: FIN 4431 and 4432.</i>
<b>FINANCE COURSES (FIN)</b>		<b>4435</b>	<b>International Banking and Finance (3)</b>  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. <i>Prerequisite: FIN 3332.</i>
<b>3331</b>	<b>Managerial Finance I (3)</b> Analysis, planning and control of internal and external finance decisions of a firm with emphasis on corporate structure. <i>Prerequisite: ACT 2292.</i>	<b>4436</b>	<b>Securities Analysis (3)</b> 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. <i>Prerequisite: FIN 3332.</i>
<b>3332</b>	<b>Managerial Finance II (3)</b> Second course in a sequence of managerial finance. Continuation of FIN 3331 with focus on topics in financial management not covered in FIN 3331. <i>Prerequisite: FIN 3331.</i>	<b>4437</b>	<b>Financial Institutions (3)</b> A comprehensive study of financial markets, institutions, instruments, etc. <i>Prerequisite: FIN 3332.</i>
<b>3333</b>	<b>Financial Mathematics (3)</b> Analysis of time value of money as it applies to loans, securities, banks, annuities, and insurance.		
<b>3334</b>	<b>Financial Statement Analysis (3)</b> The process of understanding financial statements by financial analysts and credit analysts, and other uses of financial data. <i>Prerequisite: FIN 3332.</i>		

- 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.*
- 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 3332.*
- 4440 Real Estate Finance II (3)**  
Second course in a sequence on real estate finance. Continuation of FIN 3336. *Prerequisite: FIN 3336.*
- 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: FIN 3332.*
- 4495 Selected Topics in Finance (3)**  
Focus on finance topics of a timely nature and/or special interest. *Prerequisite: FIN 3332.*

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**FRENCH COURSES (FRN)**

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Note: For additional information, see Placement in Foreign Language Courses.

- 1101 Introductory French I (3)**  
Introduction to the French language and culture.
- 1102 Introductory French II (3)**  
Introduction to the French language and culture.
- 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 equivalent.*
- 2202 Intermediate French II (3)**  
Reinforcement of grammatical skills, reading of simple French prose and poetry, composition and conversation. *Prerequisite: FRN 2201 or equivalent.*
- 3301 Advanced French I (3)**  
Advanced-level reading, intensive work on composition, comprehensive treatment of French phonetics. *Prerequisite: FRN 2202 or equivalent.*
- 3302 Advanced French II (3)**  
Advanced-level reading, intensive work on composition, aural comprehension, and practical conversation facility. *Prerequisite: FRN 2202 or equivalent.*

- 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 equivalent.*
- 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 the instructor.*
- 3311 French Culture on Location II (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 the instructor.*
- 4401 French Literature I (3)**  
French literature from the Middle Ages through the Revolution of 1789. *Prerequisite: FRN 3301 or 3302.*
- 4402 French Literature II (3)**  
French literature of the 19th and 20th centuries. *Prerequisite: FRN 3301 or 3302.*

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

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

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**GEOGRAPHY COURSES (GEO)**

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- 2210 World Regional Geography (3)**  
Physical and cultural features, economy, and populations of the geographic regions of the world.
- 3300 Principles of Physical Geography (3)**  
Earth geography including climate, soils, natural vegetation, water resources, rocks, minerals, and surface structures.
- 3301 Principles of Cultural Geography (3)**  
Interrelationship of geographical elements in various world situations.
- 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.

- 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.*
- 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.*
- 3331 Geography of the Middle East and North Africa (3)**  
Physical setting, resource distribution, economy, population characteristics, and geopolitical importance of the region.
- 3350 Weather and Climate (3)**  
A study of the physical properties of weather and climate. *Prerequisite: Twelve hours of science or social science.*
- 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.
- 4403 Conservation (3)**  
The conservation of natural and human resources with emphasis on population expansion as the major element in changing ecology.
- 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.*
- 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.*
- 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.*
- 4411 Demography (3)**  
Population growth, stabilization, decline, and structures in the context of societal change. This course may be taken for sociology credit.
- 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.
- 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.*
- 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.*
- 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.*
- 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.

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## GEOMATICS COURSES (GEM)

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- 1100 Computer-Aided Drafting (1)**  
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.*
- 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.
- 2220 Basics of Cartography and 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 da-

- tums, elevations, and mapping. The use of computer-aided drawing software to produce maps and plats is required. *Prerequisite: MTH 1115. Co-requisite: GEM L220.*
- L220 Basics of Cartography and 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.
- 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.*
- 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.
- 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.*
- 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.*
- 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. Co-requisite: GEM L330.*
- L330 Advanced Measurement Analysis Lab (1)**  
Field laboratory experience gaining astronomic observations for azimuth, using EDM 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.
- 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.*
- 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.
- 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.*
- 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 1125, GEM 3379/L379. Recommended completion of PHY 2253 or the equivalent. Co-requisite: GEM L370.*
- 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.
- 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.*
- 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. *Prerequisite: MTH 1125 and MTH 2210 or equivalent. Co-requisite: GEM L379.*
- 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.
- 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.*

- 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.
- 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.*
- 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.
- 4405 Route and Construction Surveying (2)**  
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.*
- 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.
- 4407 Land Development (1)**  
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.*
- L407 Subdivision Design Practice (1)**  
This computer laboratory provides the student the opportunity to design and create those drawings necessary for local government approval of the typical subdivision.
- 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.*
- 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.
- 4495 Cooperative Work Experience I (2)**  
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.*
- 4496 Cooperative Work Experience II (2)**  
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.*
- 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 2240 and senior standing or consent of the geomatics program coordinator.*

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### GERMAN COURSES (GER)

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Note: For additional information, see Placement in Foreign Language Courses.

- 1121 Introductory German I (3)**  
Introduction to the German language and culture.
- 1122 Introductory German II (3)**  
Introduction to the German language and culture.
- 2221 Intermediate German I (3)**  
Emphasis on basic language skills and knowledge of German culture. *Prerequisite: GER 1122 or equivalent.*
- 2222 Intermediate German II (3)**  
Emphasis on basic language skills and knowledge of German culture. *Prerequisite: GER 2221 or equivalent.*
- 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 Foreign Language Courses.

- 1111 Introductory Greek I (3)**  
Introduction to the ancient Greek language with emphasis on pronunciation, basic vocabulary, fundamentals of grammar, and graded readings.
- 1112 Introductory Greek II (3)**  
Continuation of GRK 1111. *Prerequisite: GRK 1111.*  
  
*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.*

**HEALTH AND PHYSICAL EDUCATION COURSES (HPR)**

- 1101 Badminton (1)**  
Physical education activity course.
- 1104 Golf (1)**  
Physical education activity course.
- 1107 Swimming (1)**  
Physical education activity course.
- 1108 Tennis (1)**  
Physical education activity course.
- 1109 Intermediate Swimming (1)**  
Physical education activity course.
- 1110 Paddle Tennis (1)**  
Physical education activity course.
- 1111 Archery (1)**  
Physical education activity course.
- 1112 Advanced Swimming (1)**  
Physical education activity course.
- 1122 Water Aerobics (1)**  
Physical education activity course.
- 1123 Synchronized Swimming (1)**  
Physical education activity course.
- 1130 Social Contemporary Dance (1)**  
Physical education activity course.
- 1131 Folk Dance I (1)**  
Physical education activity course.
- 1133 Square Dance (1)**  
Physical education activity course.

- 1134 Ballroom Dance (1)**  
Physical education activity course.
- 1135 Ballet I (1)**  
Physical education activity course.
- 1136 Jazz Techniques I (1)**  
Physical education activity course.
- 1137 Tap Dance (1)**  
Physical education activity course.
- 1138 Clog Dance Techniques I (1)**  
Physical education activity course.
- 1139 Aerobic Dance I (1)**  
Physical education activity course.
- 1141 Jogging (1)**  
Physical education activity course.
- 1142 Weight Training (1)**  
Physical education activity course.
- 1144 Step Aerobics (1)**  
Physical education activity course.
- 1146 Physical Defense for Women (1)**  
Physical education activity course.
- 2200 Health Concepts (1-1)**  
A study of health concepts that characterizes a process in the life cycle that is typical of every individual.
- 2201 Camping and Outdoor Education (1-1)**  
Camping, leadership and program planning.
- 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.
- 2204 Intermediate Golf (1)**  
Physical education activity course.
- 2208 Intermediate Tennis (1)**  
Physical education activity course.
- 2223 Advanced Synchronized Swimming (1)**  
Physical education activity course.
- 2230 Rhythmic Activities for Special Populations (1)**  
Physical education activity course.
- 2231 Folk Dance II (1)**  
Physical education activity course.

- 2232 Modern Dance Techniques II (1)**  
Physical education activity course.
- 2235 Ballet II (1)**  
Physical education activity course.
- 2236 Jazz Techniques II (1)**  
Physical education activity course.
- 2238 Clog Dance Techniques II (1)**  
Physical education activity course.
- 2239 Aerobic Dance II (1)**  
Physical education activity course.
- 2240 Personal Health (2-2)**  
Personal health as it applies to practices, knowledge and behavior.
- 2241 Intermediate Jogging (1)**  
Physical education activity course.
- 2242 Intermediate Weight Training (1)**  
Physical education activity course.
- 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.
- 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.
- 2252 Methods of Teaching Dance (2-2)**  
Social, folk and square dancing, including basic rhythmic activities which can be taught in elementary, middle and high schools.
- 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.
- 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.*
- 3330 Physical Skills Proficiency (2-2)**  
This course covers the rules, regulations, terms, origin, development, safety, equipment, and performance of skills of the physical sport skills related to HPR 4485/4486.
- 3331 Physical Skills Proficiency II (2-2)**  
Traces the historical development of fitness, conditioning, and wellness concepts for life. Identifies rules, regulations, and terminology of specified sport activities. Students are expected to perform specified skill tests in golf, soccer, swimming, tennis, and track and field with a proficiency level of 80%.
- 3332 Modern Dance Techniques III (1)**  
Physical education activity course.
- 3340 Principles of Recreation (3-3)**  
Overview of recreation on federal, state and local levels with respect to history, program, population, facilities and trends.
- 3350 Psychology of Wellness and Performance (3-3)**  
Theory and practical application of psychological factors that impact wellness and performance of individuals and groups.
- 3352 Kinesiology and Efficiency of Human Movement(3-3)**  
General anatomy, joint and muscle function, and analysis of body movements. *Prerequisites: HPR 3360 or BIO 3347 and 3348*
- 3355 Introduction to Sport and Fitness Management (2-2)**  
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.
- 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, CHM 1142 and L142.*
- 3361 Integrating HPER into the Curriculum (3)**  
Methods and materials of teaching physical education for grades K-6. *Prerequisite: Junior standing or above.*
- 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: HPR 2263.*
- 3368 Water Safety Instructor (WSI) (2-2)**  
Organization and teaching swimming and water safety programs. *Prerequisite: Swimming Certificate.*
- 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.*

- 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: junior standing or above.*
- 3392 Water Safety Instructor for the Handicapped (1-1)**  
Organization and methods of teaching swimming to adapted students. *Prerequisite: A current valid WSI Certificate (Swimming Instructor Certificate).*
- 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, 3348, L348.*
- 4400 Sports Officiating and Programs in Intramurals (3-3)**  
Focuses on school and community recreation programs, including sports, games and officiating techniques.
- 4410 Motor Development (2-2)**  
An analysis of the ways in which children develop movement capabilities. *Prerequisite: Junior standing or above.*
- 4420 Community Health (3-3)**  
A study of community organization for health including environmental health, epidemiology, and medical services.
- 4421 Human Sexuality and Sex Education (3-3)**  
Sex roles and behavior. Methods and materials for sex education.
- 4422 Substance Abuse Education (3-3)**  
A study of the abuse of drugs in society. An emphasis is placed on content, resources, and methods in drug education.
- 4427 Health Behavior (3-3)**  
The theoretical foundations of health behavior and evaluation and their application to health practice. *Prerequisite: HPR 4420.*
- 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: HPR 3355 or permission of instructor.*
- 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: HPR 3355.*
- 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: HPR 3355 or permission of instructor.*
- 4442 Health Education (3-3)**  
Course focuses on school health organization, services and institutions, grades N-12. *Prerequisite: Junior standing or above.*
- 4443 Sport Administration (3)**  
Organization and administration of sport management, recreation and athletic training programs. *Prerequisite: Junior standing or above.*
- 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: HPR 3355 or permission of instructor.*
- 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: HPR 3355 or permission of instructor.*
- 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: HPR 3360 or BIO 3347 and 3348, and HPR 3352. Co-requisite: HPR L460.*
- 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: HPR 3360 or BIO 3347 and 3348, and HPR 3352. Co-requisite: HPR 4460.*
- 4462 Physical Education for Exceptional Children (2-2)**  
This course explores programs to serve the needs of the exceptional child in schools. *Prerequisite: permission of the instructor.*
- 4465 Classroom Management for the Health and Physical Educator (2)**  
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: Junior or senior level.*
- 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.
- 4474 Exercise Physiology (3-3)**  
Physiological mechanisms and adaptations of cells, tissues, organs and systems during physical activity. *Prerequisite: HPR 3360 or BIO 3347/3348, and HPR 3391, 3352.*
- 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: HPR 4474.*
- 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 ASSM will also be discussed. *Prerequisite: HPR 4474.*
- 4476 Laboratory Practicum in Exercise Physiology (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: HPR 4474.*
- 4477 Theory and Techniques of Coaching Football (2-2)**  
Offensive and defensive techniques, purchase and case of equipment, budgeting, ethics, rules, scouting and team conditioning.
- 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.
- 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.
- 4480 Theory and Techniques of Coaching Track and Field (2-2)**  
Teaching of basic fundamentals of track and field activities.
- 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 TEP.*
- 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.
- 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.
- 4485 Teaching Individual and Team Sports (3-3)**  
Teaching methods, techniques and officiating basketball, gymnastics, badminton and soccer. *Prerequisite: HPR 3352 and admission to professional education program or permission of the instructor.*
- 4486 Teaching Individual and Team Sports (3-3)**  
Teaching methods, techniques and officiating swimming, track and field, tennis and golf. *Prerequisites: HPR 3352 and admission to professional education program or permission of the instructor.*
- 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: HPR 4474 or permission of instructor.*
- 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: HPR 4474.*
- 4489 Practicum in Dance Production and Performance (1-3)**  
A supervised experience in planning, staging and evaluating a formal dance production.
- 4490 Internship in Area of Concentration (4-10)**  
A supervised experience in planning, staging and evaluating a formal practicum in related field. *Prerequisite: Permission of the department chair.*
- 4491-4492 Guided Independent Research (1-3)**  
Additional information is indexed under Guided Independent Research and Study.
- 4493-4494 Guided Independent Study (1-3)**  
Additional information is indexed under Guided Independent Research and Study.
- 4499 Senior Seminar (1-2)**  
Students enrolled in the course will complete resumes, attend professional meetings, and be informed of certification dates and locations. *Prerequisites: Permission of instructor.*

**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.*

**HISTORY COURSES (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.

**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.

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

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

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

**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.

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

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

**1122 World History to 1500 (3)**  
 This course surveys the origins, development, and character of the major centers of civilizations and their relation-

ships to one another from the earliest civilizations to 1500.

**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.

**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.*

**3304 Military History of the United States (3)**  
 A study of war in United States history from the Colonial period through the Vietnam War, 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.*

**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.*

**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.*

**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.*

**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.*

**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.*

- 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.*
- 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.
- 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.*
- 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.*
- 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.*
- 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.*
- 3352 History of Africa (3)**  
A survey of 19<sup>th</sup>- and 20<sup>th</sup>-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.*
- 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.*
- 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.
- 3362 Archives: 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.
- 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.)*
- 4401 French Revolution and Napoleon (3)**  
A study of the absolutist-aristocratic France challenged by democratic-egalitarian ideals and revolution. The role of Napoleon as conqueror of Europe and as propagator and destroyer of the French Revolution is also studied. *Prerequisites: HIS 1101 and 1102 or permission of instructor.*
- 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.*
- 4403 Contemporary Europe (3)**  
Traces European developments 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.*
- 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.*
- 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.*
- 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.*

- 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 period. *Prerequisites: HIS 1111 and 1112 or permission of instructor.*
- 4413 Antebellum, Civil War and Reconstruction, 1815-1877 (3)**  
 Nationalism, Jacksonian democracy, territorial expansion, slavery and sectional strife, and the resulting Civil War and Reconstruction are included. *Prerequisites: HIS 1111 and 1112 or permission of instructor.*
- 4414 Emergence of Modern America, 1877-1919 (3)**  
 Agricultural decline and crisis, industrialization and urbanization, Progressive reform era, World War I, and America as a world power are discussed. *Prerequisites: HIS 1111 and 1112 or permission of instructor.*
- 4415 Contemporary America (3)**  
 America in the Great Depression, World War II and the Cold War, Civil Rights Movement, Johnson's Great Society, and America as a super power are topics which are included. *Prerequisites: HIS 1111 and 1112 or permission of instructor.*
- 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, with special emphasis on classroom participation in topical discussions. *Prerequisites: HIS 1111 and 1112 or permission of instructor.*
- 4423 U.S. 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.*
- 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.*
- 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.*
- 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.*
- 4434 Major Personalities in the Development of Civil Rights in America (3)**  
 Study of important civil rights personages and their writings from Frederick Douglas and other pre-Civil War activists and thinkers to the present. *Prerequisite: HIS 4430.*
- 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.*
- 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.*
- 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.*
- 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.*
- 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.*
- 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.*
- 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.*
- 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.*

- 4470 Oral History (3)**  
An introduction to the methods and practice of oral history.
- 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.
- 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 non-profit organization. *Note: Credit in Archival Minor only.*
- 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.*
- 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. Co-requisite: SED 4454.*
- 4481 Methods and Materials for the Secondary Teacher (4)**  
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, selection 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.
- 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.*
- 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.*
- 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 at Troy University-Dothan campus.*
- 4491-4492 Guided Independent Research (1-3)**  
Additional information is indexed under Guided Independent Research and Study.
- 4493-4494 Guided Independent Study (1-3)**  
Additional information is indexed under Guided Independent Research and Study.
- 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.*
- 4496 Secondary Education Internship — History (9)**  
Additional information is indexed under The Professional Internship Program.
- 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 and dean.*

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## HUMAN SERVICES COURSES (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.
- 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.
- 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).*
- 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.

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

*weeks in advance of the term the research is to be undertaken.*

**3390 Introduction to Manual Communication (3)**  
Students will learn basic signing techniques. This course is open to all students. Persons interested in learning manual communication who do not intend to complete an undergraduate degree are encouraged to audit or to enroll as special students.

**3391 Intermediate Manual Communication (3)**  
Students will build upon the skills learned in HS 3390 and will begin to develop conversational styles of manual communication. *Prerequisite: HS 3390.*

**3392 Advanced Manual Communication (3)**  
Students will learn an advanced conversational style of manual communication and will become proficient in advanced communication with the hearing impaired. *Prerequisite: HS 3391.*

**3393 Orientation to the Hearing Impaired (3)**  
This course will provide an understanding of the medical, psychological, social, educational and vocational issues that professionals must understand to work effectively with persons who are hearing impaired.

**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.*

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

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

**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*

## INFORMATION SYSTEMS COURSES (IS)

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**2241 Computer Concepts and Applications (3)**  
This course provides an interdisciplinary introduction to microcomputer literacy, word processing, spreadsheets, database, business graphics and the internet.

**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).*

**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.*

**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.*

**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. *Corequisite: IS 3300.*

**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.*

**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.*

**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.*

- 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.*
- 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.*
- 4430 Web Site Design (3)**  
Includes coverage of web site creation, design, programming, planning, and maintenance. *Prerequisite: IS 3346 and IS 3330.*
- 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.*
- 4443 Internet Development (3)**  
Advanced application development using databases and an Internet application development environment. *Prerequisite: IS 3346 and IS 3330.*
- 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.*
- 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.*
- 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.*
- 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.*

## INTERDISCIPLINARY EDUCATION COURSES (IED)

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- 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.*
- 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.*
- 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.*
- 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.*

## JOURNALISM COURSES (JRN)

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*NOTE: Reasonable proficiency in keyboarding (25 wpm) is a prerequisite for all journalism courses except JRN 1101 and JRN 1103.*

- 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.

- 1101 Introduction to Mass Communications (3-3)**  
The newspaper and other communications media in modern society.
- 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.*
- 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.
- 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.*
- 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 TSU-TV.*
- 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.
- 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.*
- 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.
- 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.
- 3300 Print News Photography (3-4)**  
Discussion of and practical experience in 35-millimeter photography for newspapers and magazines in the areas of general news, features and sports photography.
- 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.*
- 3312 Advanced Editing (3-4)**  
Page layout and design, including the special pages, with an introduction to typography and graphics. *Prerequisite: JRN 2211.*
- 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.*
- 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.
- 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).*
- 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.*
- 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.*
- 3327 Sports Broadcasting (3-3)**  
Advanced methods, techniques and performance styles for broadcast sports news and information. *Prerequisite: JRN 2201.*
- 3330 Journalism Practicum (variable credit 1-3 hours)**  
Supervised journalism-related experiences focusing on gathering information, writing, editing, photography, design, online journalism, electronic journalism, broadcast journalism, advertising and/or public relations.

- 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.*
- 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.
- 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.
- 4401 Community Media Management (3-3)**  
Discussion of special problems and management techniques of print, broadcast, cable and public relations organizations.
- 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.*
- 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.*
- 4410 Advanced Radio Practicum (3-6)**  
Emphasis on individualized work in radio news or production. *Prerequisite: JRN 4403 or 4405.*
- 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.*
- 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.*
- 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.*
- 4420 Advanced Television Practicum (3-6)**  
Emphasis on individualized work in television news or production. *Prerequisite: JRN 4413.*
- 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.*
- 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*
- 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.*
- 4427 Sports Reporting (3-3)**  
Advanced methods, techniques, and writing styles for reporting sports news and information. *Prerequisite: JRN 2201.*
- 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.
- 4440 Advanced Technologies in Journalism (3-4)**  
An introduction to using advanced technologies and online reporting techniques in journalism and public relations.
- 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.*
- 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.*

- 4491-4492**     **Guided Independent Research (1 to 3 credit hours per course per semester)**  
 Additional information is indexed under Guided Independent Research and Study.
- 4493-4494**     **Guided Independent Study (1 to 3 credit hours per course per semester)**  
 Additional information is indexed under Guided Independent Research and Study.
- 4495**     **Seminar (1-1)**  
 Study of issues related to ethics in journalism, public relations and advertising. *Prerequisite: Senior standing or permission of the instructor.*

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**LATIN COURSES (LAT)**

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Note: For additional information, see Placement in Foreign Language Courses.

- 1131**     **Introductory Latin I (3)**  
 Introduction to the Latin language with emphasis on pronunciation, basic vocabulary, fundamentals of grammar, and graded readings.
- 1132**     **Introductory Latin II (3)**  
 Continuation of LAT 1131. *Prerequisite: LAT 1131.*
- 2231**     **Intermediate Latin I (3)**  
 Continuation of LAT 1131-1132. *Prerequisite: LAT 1132.*
- 2232**     **Intermediate Latin II (3)**  
 Continuation of LAT 2231, culminating in the reading of authentic passages from selected Latin authors. *Prerequisite: LAT 2231.*
- 3331**     **Readings in Latin Literature (3)**  
 Readings in a selected author, period, or genre. May be repeated for credit. *Prerequisite: LAT 2232.*

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**LAW COURSES (LAW)**

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- 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.
- 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.*

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**LEADERSHIP COURSES (LDR)**

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- 1100**     **Introduction to Leadership (3-3)**  
 A survey of leadership theory, practice, and research. The course includes an investigation of leadership through studies of great leaders and thinkers. Learning about leadership is reinforced through practical exercises and experience in leadership.
- 4400**     **Leadership Seminar (3-3)**  
 A capstone course designed to synthesize leadership planning and experience and to orient developing leaders to the practical and ethical challenges awaiting them.

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**MANAGEMENT COURSES (MGT)**

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- 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.*
- 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.*
- 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.*
- 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.*
- 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.*
- 4472**     **Organizational Behavior (3)**  
 A study of individual and group behavior in business organizations. *Prerequisite: MGT 3371.*

- 4473 Labor Law and Collective Bargaining (3)**  
A study of court decisions, national labor and employment laws, administrative regulations, and procedures of the National Labor Relations Board that guide effective approaches to collective bargaining and labor relations. *Prerequisite: MGT 3371.*
- 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.*
- 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.*
- 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.*
- 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.*
- 4479 Management Seminar (3)**  
Analysis of current problems and issues in management. *Prerequisite: MGT 3371.*
- 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.*
- 4481 Staffing (3)**  
Addresses theory, principles, practices, and legal requirements for effective recruitment, selection, and promotion in organizational settings. *Prerequisite: MGT 3371.*
- 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.*
- 4483 Human Resource Development (3)**  
Theory and practice in human resource training and development applied to organizational settings. *Prerequisite: MGT 3371.*
- 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.*
- 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.*
- 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.*

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### MARINE BIOLOGY COURSES (MB)

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Offered at Dauphin Island Sea Lab (DISL) only

Courses are offered during the summer semester only. Since course offerings change, check current DISL summer bulletin for specific course offerings and descriptions.

- 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.*
- 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.*
- 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.*
- 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.*

- 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.*
- 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.*
- 4416 Marine Fish Diseases (4)**  
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.*
- 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.*
- 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.*
- 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.*
- 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.*
- 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.*
- 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.*
- 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.*
- 4435 Coastal Geomorphology (2)**  
An introduction to coastal sediment processes and applied geomorphology with emphasis on waves, tides, and sedi-
- ments. *Prerequisites: BIO 1101, L101, 2229, L229, CHM 1143, L143.*
- 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.*
- 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.*

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### MARKETING COURSES (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.
- 3362 Advertising (3)**  
The planning, creation, utilization, and place of advertising programs, media use, and research to support marketing strategy. *Prerequisite: MKT 3361.*
- 3363 Transportation Management (3)**  
Management considerations in selection and effective utilization of various modes of transportation. *Prerequisite: MGT 3371; MKT 3361.*
- 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.*
- 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.*
- 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.*
- 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.*
- 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.*

- 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.*
- 4465 Business Logistics (3)**  
A study of the procurement, warehousing, and transportation activities related to distribution system design, operation, and control. *Prerequisite MKT 3361.*
- 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.*
- 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.*
- 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.*
- 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.*
- 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.*
- 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.*
- 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.*
- 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 096. 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.*
- 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. This course will not substitute for any general studies requirement.*
- 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.*
- 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.*
- 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 include 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.*
- 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.*

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## MATHEMATICS COURSES (MTH)

- 0096 Pre-Algebra (3)**  
Topics include operations with whole numbers, decimals, and fractions. Ratio, percent and equation solving will be

- 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: MTH 1115 or 1114, or advanced placement.*
- 1126 Calculus II (4)**  
Topics include vectors in the plane and in space, line and planes in space, applications of integration (such as volume, arc, length, work, and average value), techniques of integrations, indeterminate forms, infinite series, polar coordinates, and parametric equations. *Prerequisite: MTH 1125 or advanced placement.*
- 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.*
- 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.*
- 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.*
- 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.*
- 2227 Calculus III (4)**  
Topics include vector functions, multi-variable functions, partial derivatives and their applications, quadric surfaces, multiple integrations, and vector calculus, including Green's theorem, curl, divergence, surface integrals, and Stoke's theorem. *Prerequisite: MTH 1126 or advanced placement.*
- 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.*
- 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.*
- 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.
- 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.*
- 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.*
- 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 protractor and compass. *Prerequisite: MTH 3318 or permission of instructor.*
- 3331 Linear Algebra (3)**  
Matrices, systems of equations, determinants, eigenvalues and eigenvectors. *Prerequisite: MTH 1126 or permission of instructor.*
- 3364 Vector Calculus (3)**  
Differentiation in several variables. Line and surface integrals. Potential theory and differential forms. *Prerequisite: MTH 2227.*
- 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.*
- 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 2227 and 3331, or permission of instructor.*

- 4424 Real Analysis I (3)**  
The real number system, completeness, limits, continuity, sequences, differentiation, and the Riemann integral. *Prerequisites: MTH 2227 and 3318.*
- 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.*
- 4426 Complex Analysis (3)**  
Complex numbers, elementary functions and their mappings, complex limits and power series, analytic functions, integrals, contour integral, and Cauchy integral formula. *Prerequisites: MTH 2227 and 3318 or permission of instructor.*
- 4436 Number Theory (3)**  
Divisibility, congruencies, prime numbers, Fermat's theorem, Diophantine equations, number theoretic functions. *Prerequisites: MTH 2227 and 3318.*
- 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.*
- 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.*
- 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.*
- 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.*
- 4460 Topology (3)**  
An introduction to metric and topological spaces and associated topics, separation axioms, compactness, and connectedness. *Prerequisites: MTH 2227 and 3318.*
- 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. Co-requisite: SED 4454.*
- 4481 Methods and Materials for the Secondary Teacher (4)**  
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.
- 4491/4492 Guided Independent Research (3)**  
Additional information is indexed under Guided Independent Research and Study.
- 4493/4494 Guided Independent Study (3)**  
Additional information is indexed under Guided Independent Research and Study.

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### MEDICAL TECHNOLOGY COURSES (MT)

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(Offered in hospital internship only)

- 4400 Clinical Urinalysis (1)**  
The imparting of skills for performing and interpreting routine urinalyses as well as special urinalysis procedures.
- 4401 Clinical Urinalysis Lab (1)**  
This lab section includes specimen handling, procedure manual, audio-visual, quality control, record keeping, and reporting system.
- 4402 Clinical Microbiology (4)**  
This lecture course covers areas of bacteriology, mycology, and virology.
- 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.
- 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.
- 4405 Clinical Parasitology Lab (1)**  
Use of the laboratory procedures and techniques for isolation and identification of parasitic organisms.
- 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.

<p><b>4407 Clinical Hematology Lab (2)</b> Special studies and training involving cell counts, hemoglobin and hematocrit determinations, and other special hematology procedures.</p>	<p><b>1104b Leadership Lab (1)</b> 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.</p>
<p><b>4408 Immunohematology (3)</b> This block involves blood banking, studies of the ABO blood group system, the Rh system, blood typing, antibody studies, and effects of transfusion.</p>	<p><b>2201 Individual Leadership Studies (2)</b> 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. <i>Co-requisite: MS 2204a.</i></p>
<p><b>4409 Immunohematology Lab (1)</b> Blood banking studies and techniques. Clinical applications of procedures under direct supervision.</p>	<p><b>2202 Leadership and Teamwork (2)</b> This course focuses on self-development guided by knowledge of self and group processes by focusing on challenging current beliefs, knowledge and skills. <i>Co-requisite: MS 2204b.</i></p>
<p><b>4410 Clinical Serology (2)</b> Lectures emphasizing the principles and interpretations of immunological procedures. The study of the immune systems of the body. Antigen-antibody studies and techniques.</p>	<p><b>2204a Leadership Lab (1)</b> 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.</p>
<p><b>4411 Clinical Serology Lab (1)</b> In this lab, the student becomes proficient in running and interpreting serology (immunology) tests.</p>	<p><b>2204b Leadership Lab (1)</b> 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.</p>
<p><b>4412 Clinical Chemistry (6)</b> This lecture course focuses on the principles and interpretations of biochemical analytical methods, clinical calculations, and quality control.</p>	
<p><b>4413 Clinical Chemistry Lab (4)</b> 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.</p>	

**MILITARY SCIENCE AND LEADERSHIP COURSES (MSL)**

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<p><b>1101 Foundations of Officership (1)</b> This course features an introduction to life in the U.S. Army. Topics include leadership, the unique duties and responsibilities of officers, the organization and role of the Army, basic life skills pertaining to fitness and communication, and an analysis of Army values and expected ethical behavior. <i>Co-requisite: MS 1104a.</i></p>	<p><b>3301 Leadership and Problem Solving (3)</b> 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. <i>Co-requisite: MS 3304a.</i></p>
<p><b>1102 Basic Leadership (1)</b> 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. <i>Co-requisite: MS 1104b.</i></p>	<p><b>3302 Leadership and Ethics (3)</b> 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. <i>Co-requisite: MS 3304b.</i></p>
<p><b>1104a Leadership Lab (1)</b> 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</p>	<p><b>3304a Leadership Lab (1)</b> 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.</p>

<p><b>3304b Leadership Lab (1)</b> 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.</p>	<p><b>1103 Music Theory II (3-3)</b> Study of modulation, secondary dominants, seventh chord resolution, two- and three-part forms, and intermediate-level analysis. <i>Prerequisite: MUS 1102. Co-requisites for music majors: MUS 1106 and 1108.</i></p>																																						
<p><b>4401 Leadership and Management (3)</b> 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. <i>Co-requisite: MS 4404a.</i></p>	<p><b>1105 Class Piano I (1-2)</b> Introduction to basic keyboard musicianship and music reading skills. Includes simple improvisation, harmonization and beginning chorale playing.</p>																																						
<p><b>4402 Officership (3)</b> 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. <i>Co-requisite: MS 4404b.</i></p>	<p><b>1106 Class Piano II (1-2)</b> Development of intermediate-level keyboard skills, chorale playing, sight reading and transposition. <i>Prerequisite: MUS 1105.</i></p>																																						
<p><b>4404a Leadership Lab (1)</b> 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.</p>	<p><b>1107 Aural Skills I (1-2)</b> Beginning sightsinging and rhythmic reading. Melodic, harmonic and rhythmic dictation, including intervals, chord qualities and simple/compound meters. Basic keyboard skills required.</p>																																						
<p><b>4404b Leadership Lab (1)</b> 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.</p>	<p><b>1108 Aural Skills II (1-2)</b> Intermediate level sight singing and rhythmic reading. Combined melodic and harmonic dictation, with inversions and mixed meter rhythms. Intermediate keyboard skills required. <i>Prerequisite: MUS 1107.</i></p>																																						
	<p><b>1110-4427 Private Instruction (1 credit hour per semester, 1 lesson per week)</b></p> <table border="0" style="width: 100%;"> <tr><td style="width: 50%;">1110</td><td>Violin</td></tr> <tr><td>1111</td><td>Viola</td></tr> <tr><td>1112</td><td>Cello</td></tr> <tr><td>1113</td><td>String Bass</td></tr> <tr><td>1114/2214/3314/4414</td><td>Piano</td></tr> <tr><td>1115/2215/3315/4415</td><td>Organ</td></tr> <tr><td>1116/2216/3316/4416</td><td>Voice</td></tr> <tr><td>1117/2217/3317/4417</td><td>Clarinet</td></tr> <tr><td>1118/2218/3318/4418</td><td>Oboe</td></tr> <tr><td>1119/2219/3319/4419</td><td>Flute</td></tr> <tr><td>1120/2220/3320/4420</td><td>Bassoon</td></tr> <tr><td>1121/2221/3321/4421</td><td>Saxophone</td></tr> <tr><td>1122/2222/3322/4422</td><td>Trumpet</td></tr> <tr><td>1123/2223/3323/4423</td><td>Horn</td></tr> <tr><td>1124/2224/3324/4424</td><td>Trombone</td></tr> <tr><td>1125/2225/3325/4425</td><td>Euphonium</td></tr> <tr><td>1126/2226/3326/4426</td><td>Tuba</td></tr> <tr><td>1127/2227/3327/4427</td><td>Percussion</td></tr> <tr><td>1128</td><td>Guitar</td></tr> </table>	1110	Violin	1111	Viola	1112	Cello	1113	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	Guitar
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**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.*

<p><b>1100 Basic Music Skills (2-3)</b> Elements of music with emphasis on mastering the basic skills of musicianship. Music reading, orientation to the keyboard, sight-singing and dictation will be included. <i>NOTE: This course cannot be used in meeting degree requirements other than general electives. May not be taken concurrently with any other theory course.</i></p>
<p><b>1102 Music Theory I (3-3)</b> Study of fundamental characteristics of tonal music, including figured bass, transposition, four-part voice leading and basic analysis. <i>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.</i></p>

*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).*

- 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.
- 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.*
- 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.
- 1182 Choir (1-3)**  
Choral ensemble; open to all students by permission of director.
- 1183 Collegiate Singers (1-3)**  
Select choral group devoted to performance of choral masterworks. *Prerequisite: Permission of director.*
- 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.
- 1192 Madrigal Singers (1-3)**  
Performance of choral chamber music in a variety of styles, including Renaissance, 20th Century, jazz and pop. *Prerequisite: Audition with director.*
- 2202 Music Theory III (3-3)**  
Principles of 16th century counterpoint and analysis of through-composed forms. *Prerequisite: MUS 1103. Corequisite for music majors: MUS 2207.*
- 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.*
- 2207 Aural Skills III (1-2)**  
Advanced sight singing and rhythmic reading. Contrapuntal dictation and transcription projects. Intermediate keyboard skills required. *Prerequisite: MUS 1108.*
- 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.
- 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.
- 3301 Music History I (2-2)**  
Evolution of music, stylistic characteristics of major movements and their relationship to literary, artistic and social trends. This course includes the pre-Christian, Romanesque, Gothic and Renaissance periods. *Prerequisite: MUS 1103.*
- 3302 Music History II (2-2)**  
Includes composers, music literature, style characteristics and societal influences of the Baroque, Classic, Romantic and Post-Romantic periods. *Prerequisite: MUS 1103.*
- 3303 Music History III (2-2)**  
Composers and musical works from Impressionism through the late 20th century, and the non-musical events which influenced them. Covers the wide diversity of mid-20th century styles, including Expressionism, Pandiatonicism, Atonality, Neo-Classicism, Serialism, Neo-Romanticism and others. *Prerequisite: MUS 1103.*
- 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.
- 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.*
- 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.*
- 3351 Class Brass (1-2)**  
Group instruction in techniques of playing and teaching brass instruments.
- 3352 Class Woodwinds (1-2)**  
Introduction to each of the principal woodwind instruments, emphasizing teaching techniques suitable for band classes.
- 3353 Class Percussion (1-2)**  
Group instruction in playing and teaching the principal pitched and non-pitched percussion instruments.
- 3354 Class Strings (1-2)**  
Group instruction in techniques of playing and teaching stringed instruments.
- 3356 Class Voice (1-2)**  
Introduction to the use of the singing voice for non-voice principals in music education.
- 3358 Beginning Folk Guitar (1-2)**  
Basic introduction to guitar chording and accompanying songs in the classroom or in informal settings.

- 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.*
- 3364 String Orchestra (1-2)**  
String ensemble open to all students with permission of director.
- 3365 Class Composition (1-3)**  
Creative musical writing, criticism, and study of compositional techniques. *Prerequisite: Permission of instructor.*
- 3382 Choral Techniques (3-3)**  
Organizational and rehearsal procedures, choral tone, diction and choral literature. *Prerequisite: MUS 1103 and junior standing.*
- 3384 Band Techniques (3-3)**  
Rehearsal techniques, band pageantry, jazz band, instrument repair, and music literature for band. *Prerequisite: MUS 1103 and junior standing.*
- 3385 Symphony Band (1-3)**  
Selective concert organization for performance of advanced literature for band and wind ensemble. *Prerequisite: Audition with director.*
- 3386 Jazz Ensemble (1-3)**  
Selective ensemble for performance in a wide variety of jazz styles. *Prerequisite: Audition with director.*
- 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.
- 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.
- 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.
- 4452 Opera Literature (3-3)**  
Historical survey of major operas from all periods designed to increase appreciation and understanding of this dramatic art form.
- 4455 Survey of the Broadway Musical (3-3)**  
Traces the origins and surveys major works of the Broadway musical repertoire.
- 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 exceptional populations and designing musical activities for each. *Prerequisite: sophomore standing.*
- 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.*
- 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.
- 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.*
- 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. Co-requisite: IED 4454.*
- 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.*
- 4491/4492 Guided Independent Research (1-3 credit hours per course)**  
Additional information may be found under Independent Research and Study.
- 4493/4494 Guided Independent Study (1-3 credit hours per course)**  
Additional information may be found under Independent Research and Study.
- 4499 Senior Recital (1-1)**  
Final preparations and public presentation of the senior recital required of all music education majors.

**MUSIC INDUSTRY COURSES (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.
- 3315 Song Writing (2)**  
Study of basic skills and techniques of songwriting including melodic construction, harmonic progression, and lyric writing and revisions.
- 3320 Grant Writing/Funding for the Musical Arts (2)**  
Identifying funding sources and creating effective grant proposals for music production and related activities.
- 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.
- 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.
- 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.
- 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.
- 4410 Arts Management/Concert Production (2)**  
Study of the arts organization and the performing artist within a social and governmental context.
- 4420 Film Scoring (2)**  
Examination of the process and preparation of digital music for film, digital video and animation.
- 4460 Senior Practicum (3)**  
Culminating project and presentation in student's area of emphasis integrating internship, career placement and portfolio development
- 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.

**4499 Music Industry Internship (9)**

Placement in real-world work environment in the music industry. Supervised by a music industry faculty member.

**NURSING COURSES (NSG)****(ASN Program)**

- 1110 Foundations of Adult Health Transition Practicum (2-4)**  
Reviews the concept of human-environment interaction throughout the life span. Focuses on the role of the registered nurse in the application of the nursing process to assist individuals in adapting to common and altered health states. *Prerequisites: Admission to Advanced Placement for LPNs; NSG 1135, 1151, MTH 1112, BIO 3347, L347, BIO 3348, L348, ENG 1101, PSY 3300, 2200, TROY 1101, and NSG 2213. Co-requisite: NSG 1140.*
- 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: ENG 1101, MTH 1112, PSY 2200, BIO 3347, L347. Prerequisites or co-requisites: NSG 1135, BIO 3348, L348.*
- 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: ENG 1101, BIO 3347, L347, MTH 1112, PSY 2200. Prerequisite or corequisites: BIO 3348, L348.*
- 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 3300, and TROY 1101. Co-requisites: NSG 1141 or 1110.*
- 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. Co-requisites: NSG 1140.*
- 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:* ENG 1101, MTH 1112, PSY 2200, BIO 3347, L347.

- 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 implications. *Prerequisites:* NSG 1140, NSG 1141 or 1110, and BIO 3372, L372.
- 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.
- 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 or 1110, 2271, 2272. BIO 3372, L372. *Corequisite:* NSG 2256.
- 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 or 1110, NSG 2271, NSG 2272, BIO 3372, L372. *Co-requisite:* NSG 2253.
- 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 or 110, 2271, 2272. BIO 3372, L372. *Corequisite:* NSG 2266.
- 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 or 1110, NSG 2271, NSG 2272, BIO 3372, L372. *Co-requisite:* NSG 2253.
- 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 3300, TROY 1101. *Co-requisites:* NSG 2272.
- 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 1130, 1131, 1135, 1151, 2213, BIO 3348, L348, PSY 3300, TROY 1101. *Co-requisites:* NSG 2271.
- 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, 2256, 2266, 2282, 2283. *Co-requisite:* NSG 2281.
- 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, 2256, 2266, 2282, 2283. *Co-requisite:* NSG 2280.
- 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 or 1110, NSG 2271, NSG 2272, BIO 3372, L372. *Co-requisite:* NSG 2283.
- 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 or 1110, NSG 2271, NSG 2272, BIO 3372, L372. *Co-requisite:* NSG 2282.

#### (BSN Program)

- 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.
- 1105 Medical Terminology (1)**  
Develops the use of Latin and Greek prefixes, root words, and suffixes to understand medical terminology. Open to all majors.
- 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.
- 1160 Introduction to Technology in Nursing Education (1)**  
Provides a foundation for using computer technology in learning; addresses digital communication, resources and research. General topics include communication through electronic mail and course discussion using the World Wide Web as an information tool, online scholarly research, and digital presentations. Course focus is the application of technology skills in learning. Open to all majors.
- 2201 Dosage Calculations (1)**  
Calculations of medication dosages including conversions from one measuring system to another, symbols used in medication administration, and arithmetic computations. *Prerequisite: Admission to BSN Program or permission of instructor.*
- 2204 Nutrition (2)**  
A study of the nutrients, their utilization in the body, and their importance in the health of individuals throughout the life cycle. Examines dietary patterns of various cultural, ethnic, and religious groups. Explores food safety and nutrition research. Open to all majors.
- 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.
- 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 throughout the life span. Includes dietary patterns of various cultural, ethnic, and religious groups, nutritional assessments and food safety. Open to all majors.
- 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.*
- 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.*
- 2285 Perspectives of Aging (2)**  
Provides a psychological, physiological and sociological knowledge base for interacting with the aging client. Identifies senescence and alterations associated with the aging process. Examines the role of the older person within the human environment interactive system. Open to all majors.
- 3301 Pharmacology (2)**  
Acquaints the student with the historical aspects of pharmacology, pharmacological terms, standards and controls, characteristics of various drug classifications, related nursing implications and the application of the nursing process to the pharmacological needs of the client. Open to all majors. *Prerequisites: CHM 1142, L142, BIO 3347, L347, 3348, and L348. Prerequisite or corequisite: NSG 3325/3326.*
- 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.*
- 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.*
- 3306 Perspectives of Professional Nursing (2)**  
Introduces students to the principles, values and standards implicit in the profession of nursing. Explores past, present and emerging roles of professional nurses. Presents a practical approach to the development of critical thinking, testing and therapeutic communication skills. *Prerequisite: Permission of instructor.*
- 3309 Health Assessment (2)**  
Focuses on the assessment phase of the nursing process as a means of collecting data for use in making nursing decisions. Emphasizes acquisition of knowledge and skills required to perform health assessments of individuals at various stages of life span development and to communicate health assessment data. Includes assessment of internal and external dimensions of individual health states. *Prerequisites: ENG 1101, 1102, BIO 3347, L347, 3348, and L348. Co-requisite: NSG 3310 (unless exempt because of ASN substitution credit).*
- 3310 Health Assessment Practicum (1-2)**  
Provides opportunities for students to practice health assessments skills by performing health assessments of essentially well individuals at various stages of life span development. Includes analysis and communication of findings. *Prerequisites: ENG 1101, 1102, BIO 3347, L347, 3348, and L348. Co-requisite: NSG 3309.*
- 3313 Nursing Concepts I (3)**  
Explores the relationship between life span development and adaptive responses in the human environment interactive system. Examines the biological, psychological, and socio-cultural dimensions of assisting individuals to meet basic health needs and introduces the concept of illness as an altered health state. Emphasizes the nursing process and the role of the nurse in diagnosing and treating hu-

- man responses to health promotion needs and common health alterations across the life span. *Prerequisite: Admission to BSN Program. Co-requisite: NSG 3314.*
- 3314 Nursing Concepts I Practicum (3-6)**  
Provides clinical learning opportunities for students to incorporate biological, psychological, and sociological dimensions into the care of individuals who require assistance in meeting basic health needs and into the diagnosing and treatment of human responses to common health alterations across the life span. Focuses on human-environment interaction and emphasizes the use of the nursing process as a systematic approach to health promotion and the provision of illness and restorative care. *Prerequisite: Admission to BSN Program. Co-requisite: NSG 3313.*
- 3315 Pathophysiology (3)**  
Explores the relationship between normal and altered physiology in human systems. Examines physiologic adaptive processes to internal and external environmental stressors. Emphasizes pathophysiologic manifestations of altered states of health. *Prerequisites: BIO 3347, L347, 3348, and L348. Open to all majors.*
- 3323 Maternal-Infant Health Nursing (3)**  
Provides a knowledge base for care of childbearing families. Examines the childbearing family as a part of the human environment interactive system. Emphasizes the nurse's role in facilitating adaptive responses of the childbearing family during the antepartal, intrapartal and postpartal periods. *Prerequisites: Successful completion of all nursing courses in semesters I and II of BSN clinical nursing sequence. Co-requisite: NSG 3324.*
- 3324 Maternal-Infant Health Nursing Practicum (2-4)**  
Provides clinical learning opportunities for students to provide nursing care for childbearing families. Emphasizes use of the nursing process as systematic approach to facilitate adaptive responses of the childbearing family during the antepartal, intrapartal and postpartal periods. *Prerequisites: Successful completion of all nursing courses in semesters I and II of BSN clinical nursing sequence. Co-requisite: NSG 3323.*
- 3325 Nursing Concepts II (3)**  
Explores the relationship between life span development and adaptive responses in the human-environment interactive system. Continues to explore the concept of illness as an altered health state. Emphasizes the nurse's role in diagnosing and treating human responses (biological, psychological, and sociocultural) to common health alterations across the life span. *Prerequisites: Successful completion of all nursing courses in Semester I of BSN clinical nursing sequence. Co-requisite: NSG 3326.*
- 3326 Nursing Concepts II Practicum (3-6)**  
Provides clinical learning opportunities for student to diagnose and treat human responses (biological, psychological, and socio-cultural) to common health alterations across the life span. Emphasizes the use of nursing process as a systematic approach to providing illness and restorative care. *Prerequisites: Successful completion of all nursing courses in Semester I of BSN clinical nursing sequence. Co-requisite: NSG 3325.*
- 3332 Child Health Nursing (3)**  
Provides theoretical foundation for the nursing care of children. Examines the relationship between growth and development and the adaptive responses of children within the human-environment interactive system. Emphasizes the nurse's role in health promotion and maintenance, illness and restorative care for children of various ages. *Prerequisites: Successful completion of all nursing courses in semesters I and II of BSN clinical nursing sequence. Co-requisite: NSG 3333.*
- 3333 Child Health Nursing Practicum (2-4)**  
Provides clinical learning opportunities for students to provide illness and restorative care for children experiencing alterations in health states. Emphasizes use of the nursing process in facilitating human adaptive responses to child health alterations. *Prerequisites: Successful completion of all nursing courses in semesters I and II of BSN clinical nursing sequence. Co-requisite: NSG 3332.*
- 3334 Psychiatric-Mental Health Nursing (3)**  
Explores mental illness as an altered response to internal and external environmental dimensions. Examines selected theories of mental health and illness for use in nursing practice. Emphasizes the nursing process as a systematic approach to facilitating human adaptive responses to mental health alterations across the life span. *Prerequisites: Successful completion of all nursing courses in Semester I of BSN clinical nursing sequence. Co-requisite: NSG 3335.*
- 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 use of the nursing process in facilitating human adaptive responses to mental health alterations. *Prerequisites: Successful completion of all nursing courses in Semester I of BSN clinical nursing sequence. Co-requisite: NSG 3334.*
- 3336 Adult Health Nursing (3)**  
Continues to explore the relationship between life span development and adaptive responses in the human environment interactive system. Continues to explore the concept of illness as an altered health state for the adult. Emphasizes the nurse's role in diagnosing and treating human responses (biological, psychological, and socio-cultural) to common health alterations across the lifespan. *Prerequisite: Successful completion of all nursing courses in semesters I and II of the BSN clinical nursing sequence. Co-requisite: NSG 3337.*
- 3337 Adult Health Nursing Practicum (2-4)**  
Provides clinical learning opportunities for student to diagnose and treat human responses (biological, psychological and socio-cultural) to common health alterations across the life span. Emphasizes the use of the nursing process as a systematic approach to providing illness and restorative care. *Prerequisite: Successful completion of all nursing courses in semesters I and II of the BSN clinical nursing sequence. Co-requisite: NSG 3336.*
- 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 is-

sues 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.*

**3350 Case Management in Healthcare (2)**

This course provides the student with a beginning understanding of theoretical and practical information about case management. In addition, the course familiarizes the students with the roles of the case manager in the evolving health care climate of today. Open to all juniors and seniors in the College of Health and Human Services.

**3370 Professional Nursing (2)**

Provides Registered Nurse students the opportunity to explore the principles, values, standards, internal and external dimensions impacting the profession of nursing. Examines past, present, and emerging roles of the professional nurse. Examines theoretical foundations for implementation of the leadership/management role of the professional nurse. *Prerequisite: Current Registered Nurse license in Alabama and admission to the BSN Program.*

**4405 Public Health Nursing (3)**

Provides theoretical foundation for public health nursing practice. Explores the reciprocal relationship between environmental dimensions and public health. Emphasizes the nurse's role in the delivery of public health nursing care as well as community-based nursing care. *Prerequisites: All 3000-level nursing courses. Co-requisite: NSG 4406.*

**4406 Public Health Nursing Practicum (2-4)**

Provides clinical learning opportunities for students to manage the nursing care of individuals, families, groups, and communities. Emphasizes use of the nursing process in promoting and maintaining health of individuals, families, and communities. *Prerequisites: Successful completion of all nursing in semesters I and II of BSN clinical nursing sequence. Co-requisite: NSG 4405.*

**4407 Clinical Nutrition (1)**

A study of clinical nutrition applied to real-life situations with the focus on the human as a unique system affected by economic, ethnic, psychological and physiological stimuli. *Prerequisite: Admission to the BSN clinical nursing sequence.*

**4413 Nursing Concepts III (3)**

Examines individual and group responses to complex, multi-system stressors within the human-environment interactive system. Explores complex multi-system stress as crisis. Emphasizes the nurse's role in diagnosing and treating individual and group responses to complex, multi-system stressors across the life span. *Prerequisites: Successful completion of all nursing courses in semesters I, II, and III of the BSN clinical nursing sequence. Co-requisite: NSG 4414.*

**4414 Nursing Concepts III Practicum (2-4)**

Provides clinical learning opportunities for students to examine individual and group responses to complex, multi-system stressors, within the human-environment interactive system. Emphasizes use of the nursing process in diagnosing and treating individual and group responses to complex, multi-system stressors across the life span. *Prerequisites: Successful completion of all nursing*

*courses in semesters I, II and III of the BSN clinical nursing sequence. Co-requisite: NSG 4413.*

**4415 Nursing Leadership/Management (2)**

Provides the theoretical foundation for implementation of the leadership/management role of the professional nurse. Explores leadership/management theories and principles and the nature of organizations. Emphasizes strategies for utilizing leadership/management skills in various dimensions of the human-environment interactive system. *Prerequisites: Successful completion of all 3300-level nursing courses.*

**4417 Senior Seminar (1)**

Explores past, present, and emerging roles of professional nurses and examines internal and external dimensions affecting the nursing profession. *Prerequisites: Successful completion of all 3300 level nursing courses.*

**4419 Research Process in Nursing (2)**

Explores the steps in the research process and the legal and ethical considerations in the conduct of nursing research. Examines variation in research designs, types of measurement tools, validity, and reliability. The course concludes with application of existing research to nursing practice. *Prerequisite: Successful completion of all nursing courses in semesters I and II of the BSN clinical nursing sequence.*

**4421 Senior Clinical Preceptorship (3-9)**

Facilitates transition into the nurse generalist role by providing opportunities for students to refine nursing practice and leadership/management skills and develop more in-depth knowledge in a selected clinical area under the guidance of an approved preceptor. *Prerequisites: Successful completion of 3300 level nursing courses.*

**4430 Advanced Nursing Theory (3)**

Examines individuals and group responses to complex, multi-system stressors within the human environment. Explores complex multi-system processes. Emphasizes the nurse's role in diagnosing and treating individuals and groups in complex, multi-system stressors in acute care environments. *Prerequisites: Successful completion of all general studies requirements, NSG 3370, NSG 3309, NSG 3310, NSG 4405, NSG 4406, and NSG 4407. Co-requisite: NSG 4431.*

**4431 Advanced Nursing Preceptorship (2-6)**

Provides clinical learning opportunities for students to examine individual and group responses to complex, multi-system disease processes. Emphasizes diagnosing and treating individuals and groups in a variety of settings. *Prerequisites: Successful completion of all general studies requirements, NSG 3370, NSG 3309, NSG 3310, NSG 4405, 4406, and 4407. Co-requisite: NSG 4430.*

**4493-4494 Guided Independent Study (1-3)**

Additional information is indexed under Academic Regulations. *Prerequisite: Permission of instructor.*

**PHILOSOPHY COURSES (PHI)**

- 2201 Introduction to Political Philosophy (3)**  
Major Classical sources of political thought and the application of these sources to contemporary political issues.
- 2203 Introduction to Philosophy (3)**  
Brief history of philosophical ideas and the basics of Aristotelian logic.
- 2204 Ethics and the Modern World (3)**  
An introduction to basic ethics and to contemporary ethical issues.
- 3301 Western Philosophy (3)**  
Survey of philosophical ideas from the ancient Greeks through the 20th century.

**PHYSICS COURSES (PHY)**

- 2252 General Physics I (3)**  
An introduction to the laws of mechanics and thermodynamics. *Prerequisite: MTH 1114 or 1115. Co-requisite: PHY L252.*
- 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.*
- 2253 General Physics II (3)**  
An introduction to the laws of optics, electricity and magnetism. *Prerequisite: PHY 2252, L252. Co-requisite: PHY L253.*
- 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.*
- 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.*
- 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.*
- 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.*

- 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.*
- 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.*
- L410 Modern Physics Laboratory (1)**  
Selected experiments in modern physics. *Co-requisite: PHY 4410.*
- 4411 Advanced Modern Physics (3)**  
Foundations of statistical physics, solid state physics, nuclear physics, elementary particles, astrophysics, and cosmology. *Prerequisite: PHY 4410*
- 4420 Mechanics (3)**  
Kinematics and dynamics of particles and systems of particles. *Prerequisite: MTH 2227 and PHY 2253, L253 or PHY 2263, L263.*
- 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.*
- 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.*
- L459 Optics Laboratory (1)**  
Selected experiments in geometric and physical optics. Laboratory work emphasizes the basic principles of optics, the use of measuring instruments, and the interpretation of data. *Co-requisite: PHY 4459.*
- 4491-2 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.*
- 4493-4 Guided Independent Study (1-4)**  
Independent study for advanced students under the direction of a faculty member. *Prerequisite: Permission of department chair.*
- 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)**

**2200 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.

**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.

**2241 American National Government (3)**  
A study of the Constitution, federalism, the Presidency, Congress, the courts, and politics on the national level.

**3300 Foundations of Political Science (3)**  
An introduction to the discipline of political science, this course offers an overview of the sub-fields and methods within the discipline.

**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.*

**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.

**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.

**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.

**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.

**3343 American Political Processes (3)**  
This course examines key topics in U.S. politics, specifically looking at national problems, actors and proposed solutions.

**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.

**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.

**3364 State and Local Politics (3)**  
An investigation of political processes and organization at the state and local level in the United States.

**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.

**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.

**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.

**4420 Constitutional Law (3)**  
A survey of the legal, political, and methodological problems in constitutional law.

**4421 Principles of 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.

**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.

**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.

- 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.
- 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.
- 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.
- 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.
- 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.
- 4450 Latin American Politics (3)**  
An introduction to the social and political institutions of Latin America
- 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.
- 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.
- 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.
- 4460 Intercultural Relations (3)**  
An analysis of the influence of culture on interstate relations including theories, concepts, and applications.
- 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.
- 4466 Middle Eastern Politics (3)**  
An introduction to the social and political institutions of the contemporary Middle East
- 4470 European Politics (3)**  
An introduction to the social and political institutions of contemporary Europe.
- 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.
- 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.
- 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.
- 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
- 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.*
- 4491-- 4492 Guided Independent Research (1-3 credit hours each)**  
Additional information is indexed under Guided Independent Research and Study.
- 4493 – 4494 Guided Independent Study (1-3 credit hours each)**  
Additional information is indexed under Guided Independent Research and Study.
- 4495 Selected Topics in Political Science (3)**  
Examines selected topics of a timely nature and/or special interest within the field of political science.

<b>PSYCHOLOGY COURSES (PSY)</b>		
<b>2200</b>	<b>General Psychology (3)</b> A survey of the basic theories, concepts, principles, and research findings in the field of psychology.	<b>3311</b> <b>Research Methods (3)</b> An introduction to the design, analysis, and interpretation of behavioral research, including strategies for reviewing scientific literature and organizing a research report. <i>Prerequisite: PSY 3301.</i>
<b>2201</b>	<b>Honors General Psychology (3)</b> A survey of the basic theories, concepts, principles, and research findings in the field of psychology.	<b>3312</b> <b>Psychology of Women (3)</b> The study of women's experience and gender issues in the context of psychological theory and research.
<b>2205</b>	<b>Psychology of Adjustment (3)</b> A course in mental health, designed to assist the individual in making a good adjustment to the changing requirements of the environment.	<b>3320</b> <b>Child Psychology (3)</b> The development of children from conception to puberty. Includes physical, cognitive, perceptual, language, social and emotional development.
<b>2210</b>	<b>Developmental Psychology (3)</b> A study of human development across the life-span with emphasis on psychosocial, physical, emotional, and cognitive changes.	<b>3322</b> <b>Abnormal Child Psychology (3)</b> 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 <i>Diagnostic and Statistical Manual of Mental Disorders</i> . Includes such disorders as ADHD, conduct problems, anxiety, mood, mental retardation, and autism.
<b>2230</b>	<b>Orientation to Psychology (3)</b> Introduction to the language of psychology, APA writing style, and library research. Also includes an over view of career paths in psychology.	<b>3325</b> <b>Adolescent Psychology (3)</b> Adolescents from puberty to early adulthood. Includes physical, cognitive, social, emotional, and personality development in cultural context.
<b>3301</b>	<b>Basic Statistics (3)</b> 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. <i>Prerequisite: MTH 1110 or higher, with a grade of C or above.</i>	<b>3330</b> <b>Health Psychology (3)</b> This course studies the science that connects behavior to health, including psychological processes and the relationship between health and human behavior.
<b>3303</b>	<b>Educational Psychology (3)</b> Characteristics of the learner and the teaching-learning process. Theories of learning, instruction, and motivation, and their application to students in grades P-12.	<b>3332</b> <b>Family Violence (3)</b> 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. <i>Prerequisite: junior standing or above. NOTE: May be taken for psychology or sociology credit, but not both.</i>
<b>3304</b>	<b>Abnormal Psychology (3)</b> The study of mental disorders emphasizing their etiology, classification and amelioration as described in the current classification system of the American Psychiatric Association.	<b>3340</b> <b>Psychology of Learning (3)</b> Introduction to learning and behavior in human and non-human animals, including fundamental principles and findings from laboratory investigations of classical, instrumental, cognitive, and social learning.
<b>3309</b>	<b>Advanced Statistics (3)</b> Advanced quantitative methods in psychology. Topics include linear regression, analysis of variance, non-parametric techniques, estimation procedures, individual and multiple comparisons, and experimental design. <i>Prerequisite: PSY 3301.</i>	<b>3346</b> <b>Educational Assessment (3)</b> 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. <i>Prerequisite: Admission to TEP. NOTE: May not be used to meet the requirements for the psychology major or minor.</i>
<b>3310</b>	<b>Sensation and Perception (3)</b> 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. <i>Prerequisite: Six semester hours of psychology and sophomore standing or above.</i>	<b>3351</b> <b>Theories of Learning (3)</b> Critical analysis of the major theories of learning, including the works of Pavlov, Thorndike, Guthrie, Tolman, Hull, Skinner, and Mowrer.

- 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.*
- 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.*
- 3370 Comparative Psychology (3)**  
This course examines the development, causal mechanisms, evolutionary history, and function of the behavior of animals, including humans.
- 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.
- 3385 Evolutionary Psychology (3)**  
An examination of human behavior and cognition from an evolutionary perspective.
- 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.*
- 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.*
- 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.*
- 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.*
- 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.*
- 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.
- 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.*
- 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.*
- 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.
- 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.*
- 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.*
- 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.*
- 4450 Theories of Personality (3)**  
Critical analysis of major theories and systems of personality. *Prerequisite: Six semester hours of psychology.*
- 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.*
- 4456 Gerontology (3)**  
The study of aging. Emphasis on biomedical, psychological, and social aspects of middle and late adulthood.

**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.*

**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.*

**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.*

**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.*

**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.*

**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.*

**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.*

**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.*

**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.*

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## QUANTITATIVE METHODS COURSES (QM)

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**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.*

**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.*

**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.*

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## READING/LITERACY COURSES (RED)

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**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.*

**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.*

*to be undertaken. May not be used to repeat a course for which a grade of D or below has been earned.*

## **REHABILITATION COURSES (RHB)**

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| <p><b>4481 Language and Literacy I (3)</b><br/>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. <i>Prerequisite: Admission to TEP.</i></p>  | <p><b>2280 Rehabilitation Research I (3)</b><br/>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. <i>Prerequisite: MTH 1110 or 1112 and IS 2200.</i></p> |
| <p><b>4482 Language and Literacy II (3)</b><br/>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. <i>Prerequisite: Admission to TEP.</i></p>   | <p><b>2281 Rehabilitation Research II (3)</b><br/>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. <i>Prerequisite: RHB 2280.</i></p>   |
| <p><b>4483 Language and Literacy III: Intervention Strategies (3)</b><br/>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. <i>Prerequisite: Admission to TEP.</i></p>  | <p><b>3320 Human Behavior In the Social Environment II (3)</b><br/>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.</p>   |
| <p><b>4484 Language and Literacy IV (3)</b><br/>This course provides a study of teaching reading in grades P-12, emphasizing methods in the content areas. <i>Prerequisites: EDU 3310, 20 semester hours in the major, and admission to TEP.</i></p>  | <p><b>3340 Social Policy and Planning (3)</b><br/>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. <i>Prerequisites: HS 2230 or permission of instructor.</i></p>   |
| <p><b>4491-4492 Guided Independent Research (1-3)</b><br/>Undergraduate research with attention to critical evaluation of research techniques, methods and procedures. <i>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.</i></p> | <p><b>3345 Foundations of Rehabilitation (3)</b><br/>Review of historical, philosophical, and legislative development of the rehabilitation movement; focuses on current service delivery systems and trends. <i>Prerequisite: HS 2230.</i></p>  |
| <p><b>4493-4494 Guided Independent Study (1-3)</b><br/>Supervised study through field or laboratory projects, guided readings, creative endeavors or achievement of specific skills. <i>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</i></p>  | <p><b>3350 Individual Differences and the World of Work (3)</b><br/>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. <i>Prerequisite: HS 2230 or permission of instructor.</i></p>   |
|   | <p><b>3360 Vocational Assessment (3)</b><br/>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. <i>Prerequisite: HS 2230 or permission of instructor.</i></p>   |
|   | <p><b>3365 Introduction to Visual Impairment (3)</b><br/>This course will provide an understanding of the medical, psychological, social, educational, and vocational issues</p>   |

that professionals must understand in order to work effectively with persons who are visually impaired.

**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.

**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.

**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.

**4410 Rehabilitation Pre-practicum (1)**

Preparation for RHB 4420. *Prerequisites: Completion of departmental core and Rehabilitation Program course requirements (except practicum).*

**4420 Rehabilitation Practicum (12)**

Provides experience in a rehabilitation setting 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 500 hours in a particular agency setting. *Prerequisites: Rehabilitation major, RHB 4410. Practicum site must be approved by instructor during RHB 4410.*

**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.*

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**RELIGION COURSE (REL)**

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**2280 World Religions (3)**

Historical development and basic beliefs of the world's major religions.

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**RISK MANAGEMENT AND INSURANCE COURSES (RMI)**

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**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 home-

owner's package, insurance regulation, and the insurance marketplace.

**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.*

**3342 Insurance Operations (3)**

The focus of Insurance Operations is the key operational activities of insurance organizations. The course specifically covers marketing and distribution systems, underwriting, principles of rate-making, reinsurance, statutory accounting, and financial analysis. Each of the functional areas is discussed within the context of regulatory and public policy issues. *Prerequisite: RMI 3335 or permission of department chair.*

**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.*

**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.*

**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.*

**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.*

**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 admin-

istrative functions. *Prerequisite: RMI 3335 or permission of department chair.* **4474**

### SCIENCE COURSES (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.*

**L233 Physical Science Laboratory (1)**  
Laboratory experiments in basic chemistry and physics. *Co-requisite: SCI 2233.*

**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.*

**L 234 Earth and Space Science Laboratory (1)**  
Laboratory experiments in basic astronomy and geology. *Co-requisite: SCI 2234.*

**3335 Physical Geology (3)**  
Constructive and destructive processes which alter the earth. *Co-requisite: SCI L335.*

**L335 Physical Geology Lab (1-2)**  
Laboratory studies of constructive and destructive processes which alter the earth. *Co-requisite: SCI 3335.*

**3336 Principles of Astronomy (3)**  
Basic facts and theories related to astronomical phenomena. *Co-requisite: SCI L336.*

**L336 Observational Astronomy Laboratory (1)**  
Star and constellation identification and observations using the telescope. *Co-requisite: SCI 3336.*

**3340 Marine Science (3)**  
A study of the physical properties and organisms of the marine environment. *Co-requisite: SCI L340.*

**L340 Marine Science Laboratory (1-2)**  
Laboratory study of the physical properties and organisms of the marine environment. *Co-requisite: SCI 3340.*

**3350 Weather and Climate (3)**  
A study of the physical properties of weather and climate. *Co-requisite: SCI L350.*

**L350 Weather and Climate Laboratory (1-2)**  
Laboratory study of physical properties of weather and climate. *Co-requisite: SCI 3350.*

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

### 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.*

### 4481 Methods and Materials for the Secondary Teacher (4)

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.

### SECONDARY EDUCATION COURSES (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.*

#### 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.

#### 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.*

#### 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.*

#### 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.*

**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.*

**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.*

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**SOCIAL SCIENCE COURSES (SS)**

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**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.*

**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.*

**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, re-

flexive decision maker throughout the internship experience. *Prerequisite: Admission to TEP. Co-requisite: SED 4454.*

**4481      Methods and Materials for the Secondary Teacher (4)**  
 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.

**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.

**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 scientist 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.

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**SOCIAL WORK COURSES (SWK)**

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**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.*

**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 2200.*

**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.*

- 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.
- 3302 Social Service Resources (3)**  
Examination of social welfare services and institutions, public and private, to include historical development, philosophical basis, structure, and function.
- 3303 Crisis Intervention (3)**  
Case management techniques for dealing with crisis. Crisis theory, stress management, and time-limited intervention will be examined.
- 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.
- 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.
- 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.*
- 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.*
- 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.*
- 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.*
- 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.*
- 4480 Social Work Pre-Practicum (1)**  
Preparation for SWK 4481. *Co-requisite: SWK 4471 and SWK 4472.*
- 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.*

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### SOCIOLOGY COURSES (SOC)

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- 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.
- 2275 Introduction to Sociology (3)**  
Survey of basic sociological concepts and the effect of social phenomena on individuals, groups and institutions.
- 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.
- 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.
- 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 21<sup>st</sup> 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.
- 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.
- 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.

<p><b>3320 Work, Family, and Changing Sex Roles (3)</b> 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.</p>	<p><b>4406 Urbanism (3)</b> Historical, physical, economic, and social evolutions of urbanized areas. Emphasis on contemporary urban problems with implications for policy and planning. <i>Prerequisite: Twelve hours of social science.</i></p>
<p><b>3323 Juvenile Delinquency (3)</b> An examination of social, economic, psychological, and physiological determinants of young people's behavior as it concerns family, community, and social worker.</p>	<p><b>4408 Rural America: Past and Present (3)</b> A study of rural society, its organization, agencies, institutions, population trends and composition, patterns of settlement, social processes and change in character. <i>Prerequisites: Twelve hours of social science.</i></p>
<p><b>3331 Family Relations (3)</b> Study of family, its origin, development, and problems affecting marital relations and happiness.</p>	<p><b>4409 Political Sociology (3)</b> 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. <i>Prerequisite: Junior standing.</i></p>
<p><b>3332 Family Violence (3)</b> 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.</p>	<p><b>4411 Demography and Population Analysis (3)</b> 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. <i>This course may be taken for geography credit.</i></p>
<p><b>3345 Criminology (3)</b> 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.</p>	<p><b>4412 Social Change (3)</b> 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. <i>Prerequisite: Junior standing.</i></p>
<p><b>3350 Social Anthropology (3)</b> 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.</p>	<p><b>4415 Correctional Systems and Practices (3)</b> An examination of the day-to-day operations and practices in modern correctional facilities in the local, state and federal systems.</p>
<p><b>3356 Sociology of Aging (3)</b> 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.</p>	<p><b>4420 Sociological Theory (3)</b> Survey of sociological theory with emphasis on theorists, their works and contributions to modern sociological theory.</p>
<p><b>3357 Sociological Aspects of Human Sexuality (3)</b> 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.</p>	<p><b>4421 Social Stratification (3)</b> 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.</p>
<p><b>3380 Social Behavior (3)</b> Analysis of social behavior based on empirical research. <i>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.</i></p>	<p><b>4425 Intro to Survey Research (3)</b> An introduction to the foundations of social research and the major types of research methods employed in sociology. <i>Prerequisite: Twelve hours in the social sciences to include one course in statistics and one course in research.</i></p>
	<p><b>4430 Sociology of Religion (3)</b> 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.</p>

- 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.*
- 4435 The Sociology of Complex Societies (3)**  
A history and analysis of complex organizations from early to modern times.
- 4436 Social Evolution: Anarchy to Democracy (3)**  
Social analysis of human history from bands to modern societies. *Prerequisite: Fifteen hours of social science.*
- 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.*
- 4441 The Sociology of Logic and Emotion (3)**  
A study of the links between logic and emotions. *Prerequisite: Nine hours of social science.*
- 4456 Gerontology (3)**  
A survey of the aged in America, with emphasis on the psychosocial aspects of aging.
- 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.
- 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.*
- 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.*
- 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.*
- 4495 Selected Topics (3)**  
Designed as a vehicle for the exploration of topics of current interest within the major discipline of sociology.

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### SPANISH COURSES (SPN)

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Note: For additional information, see Placement in Foreign Language Courses.

- 1141 Introductory Spanish I (3)**  
Introduction to the Spanish language and Hispanic cultures.
- 1142 Introductory Spanish II (3)**  
Introduction to the Spanish language and Hispanic cultures.
- 2241 Intermediate Spanish I (3)**  
A review of grammar and readings in Spanish literature and civilization. *Prerequisite: SPN 1142 or equivalent.*
- 2242 Intermediate Spanish II (3)**  
Reinforcement of grammatical skills, reading of simple Spanish prose and poetry, composition and conversation. *Prerequisite: SPN 2241 or equivalent.*
- 3332 Advanced Spanish I (3)**  
Advanced-level reading, intensive work on composition, comprehensive treatment of Spanish phonetics. *Prerequisite: SPN 2242 or equivalent.*
- 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 equivalent.*
- 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 the instructor.*
- 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. <i>Prerequisite: Permission of the instructor.</i>	<b>3309</b>	<b>Teaching Students with Moderate/Severe Disabilities (3)</b> 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. <i>Prerequisite: Admission to TEP.</i>
<b>4447</b>	<b>Readings in Hispanic Literature (3)</b> In-depth study of the works of a selected major author, period or genre in the literature of Spain or Spanish America. <i>Prerequisite: SPN 2242 or equivalent. May be repeated for credit.</i>		
<b>4450</b>	<b>Hispanic Culture and Civilization (3)</b> A survey of the geography, history, cultural achievements, institutions and daily life of Spain and other Hispanic countries. <i>Prerequisite: SPN 2242.</i>	<b>3330</b>	<b>Integrating Assistive Technology (2)</b> 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. <i>Prerequisite: Admission to TEP.</i>
<b>4491-4492</b>	<b>Guided Independent Research (1-3 credit hours per course per semester)</b> Additional information is indexed under Guided Independent Research and Study.		
<b>4493-4494</b>	<b>Guided Independent Study (1-3 credit hours per course per semester)</b> Additional information is indexed under Guided Independent Research and Study.	<b>3340</b>	<b>Diverse Learners (3)</b> 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.
<b>SPECIAL EDUCATION COURSES (SPE)</b>			
<b>(COLLABORATIVE TEACHER)</b>			
<b>3302</b>	<b>Introduction to Moderate/Severe Disabilities (3)</b> 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. <i>Prerequisite: Admission to TEP.</i>	<b>3346</b>	<b>Assessment in Special Education (3)</b> 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. <i>Prerequisite: Admission to TEP.</i>
<b>3306</b>	<b>Teaching Students with Mild Disabilities (3)</b> 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. <i>Prerequisite: Admission to TEP.</i>	<b>3349</b>	<b>Introduction to Students with Mild Disabilities (3)</b> 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. <i>Prerequisite: Admission to TEP.</i>
<b>3307</b>	<b>Strategies Instruction (3)</b> 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. <i>Prerequisite: Admission to TEP.</i>	<b>3362</b>	<b>Policies and Procedures in Special Education (3)</b> 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. <i>Prerequisite: Admission to TEP.</i>
		<b>4445</b>	<b>Educational Evaluation of Exceptional Children (3)</b> 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. <i>Prerequisite: Admission to TEP.</i>

**4454 Internship Seminar in Collaborative Teacher K-6 (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, and professionalism to professional development for teachers and other course topics. *Prerequisite: Admission to TEP. Co-requisite: SPE Internship.*

**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.*

**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.*

**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.*

**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.*

## SPEECH COMMUNICATION COURSES (SPH)

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**2214 Debate-Forensics Participation (1-3) (May be repeated for credit)**

Participation in a program of competitive public speaking and oral interpretation or related activities.

**2241 Fundamentals of Speech (3-3)**

Study of the principles and practices basic to all areas of oral communication.

**2242 Advanced Public Speaking (3-3)**

Study and application of advanced techniques of oral communication for those who show unusual presence or potential ability in public speaking. Note: Admission to the class will be determined on the basis of the instructor's evaluation of the student's basic oral communication skills. *Prerequisite: Advanced placement or SPH 2241.*

**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.

**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.

**3321 Communication Theory (3-3)**

Study of the nature of theory-building and communication theory, and of the major classifications of contemporary communication theories. *Prerequisite: SPH 2241 or permission of the instructor.*

**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.

**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 contents.

**3342 Argumentation and Debate (3-3)**

Study and application of the principles or argumentation and debate, including selected aspects of the management of a program of competitive forensics. *Prerequisite: SPH 2241 or permission of the instructor.*

**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.

**4431 Interpersonal Communication (3-3)**

Study of theories of communication behavior in relatively unstructured face-to-face situations, including small-group discussion. *Prerequisite: SPH 2241 or permission of the instructor.*

**4441 Oral Interpretation (2-2)**

Study and application of the principles and practices or oral interpretation (reading) of literature, including individual and ensemble performance. *Prerequisite: SPH 2241 or permission of the instructor.*

**4442 Rhetoric (3-3)**

Study of the historical development of rhetorical theory in Western thought from the classical to the contemporary periods and its relationship to practice and critics. The course includes opportunities for advanced public speaking and small-group discussion. *Prerequisite: SPH 2241 or permission of the instructor.*

**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: SPH or permission of the instructor.*

**4491-4492 Guided Independent Research (1-3 credit hours per course)**

Additional information is indexed under Guided Independent Research and Study.

**4493-4494 Guided Independent Study (1-3 credit hours per course)**

Additional information is indexed under Guided Independent Research and Study.