



Course Descriptions

Descriptions

Descriptions of all courses offered for undergraduate credit are arranged alphabetically by academic discipline on the following pages. Not all courses are available every term. A schedule of classes is available before the registration period for each term as an announcement of course offerings. Students are advised to consult these schedules prior to registration. The University reserves the right to withdraw any course on the grounds of insufficient enrollment.

Course Numbering

USC Upstate courses numbered from 001 to 599 may be taken for undergraduate credit. The following distinctions are made among course numbers:

- 101-299** Lower division courses primarily for students with freshman and sophomore standing.
- 300-499** Upper division courses primarily for students with junior and senior standing.
- 400-599** Upper division courses primarily for students with senior standing.

With consent of the advisor, a student may take courses numbered above or below the level normally taken by their academic classification (freshman, sophomore, junior or senior).

Course Credit

The credit value of each course is usually determined by the number of class meetings per week for one semester. Two or three laboratory hours (one period) are equivalent to one class meeting. The semester hour credit for each course is included in each course description.

Prerequisites

Students may be removed from any class for which prerequisites or other defined requirements have not been met.

Distance Learning

Individual courses may be offered by distance learning. Please check the semester schedule for listings.

AFRICAN AMERICAN STUDIES (AFAM)

AFAM U201. Introduction to African American Studies (3) An introduction to the methods and themes of African American Studies. Topics include the development of the discipline, major frameworks, research and writing in the subject area. Prerequisite: ENGL U102.

AFAM U204. African American Culture (3) An introduction to the ideas and customs of African Americans including but not limited to artistic, anthropological, psychological, linguistic, and culinary dimensions. Prerequisite: ENGL U102.

AFAM U398. Topics in African American Studies (3) Intensive study of selected topics. Prerequisite: ENGL U102.

AFAM U399. Independent Study (1-3) An individualized, contracted program of work planned in conjunction with a faculty member. Prerequisite: consent of instructor.

AMERICAN SIGN LANGUAGE (ASLG)

ASLG U101. American Sign Language I (3) Fundamentals of the language and culture including visual readiness, basic vocabulary, grammar features, and non-manual behaviors.

ASLG U102. American Sign Language II (3) Visual readiness, basic vocabulary, grammar features, and non-manual behaviors with a focus on conversational skills. Prerequisite: ASLG U101.

AMERICAN STUDIES (AMST)

AMST U101. American Studies, 17th-19th Century (3) A survey of the historical, political, social, economic and cultural forces that shaped American life from the early seventeenth to the late nineteenth century.

AMST U102. American Studies, 20th Century (3) A survey of the historical, political, social, economic and cultural forces that have shaped American life in the twentieth century.

AMST U398. Topics in American Studies (3) Interdisciplinary reading and research on selected aspects of American culture. May be taken more than once if the topic is different. Prerequisite: AMST U101 or U102, junior or senior standing, or consent of instructor.

AMST U399. Independent Study (1-3) An individualized, contracted program of study planned in conjunction with a faculty member. Prerequisite: consent of instructor.

ANTHROPOLOGY (ANTH)

ANTH U102. Understanding Other Cultures (3) Introduction to the concepts, methods and data of sociocultural anthropology and anthropological linguistics.

ART EDUCATION (ARTE)

ARTE U330. Foundations of Art Education (3) Introduction to art education as a profession through theories, historical references and philosophies. Current initiatives

in the field will be reviewed through educational research. Prerequisites: Minimum grade of C in ARTS U103 and 110.

ARTE U429. Elementary and Middle School Methods for Art Education (3) Instructional strategies to construct appropriate curriculum for K-8 schools. The topics are artistic growth of children, responding to art works, studio production and classroom management. A portion of the course includes a 30 hour practicum component. Prerequisites: ARTE U330 and admission to the professional program.

ARTE U430. Secondary Methods for Art Education (3) Curriculum designs for secondary visual arts classroom. The development of instructional skills for various student populations is included in the course of study as well as research and current initiatives. The course includes a 30 hour practicum component in the schools. Prerequisites: ARTE U429 and admission to the professional program.

ARTE U450. School Art Program (3) Developing and working with essential components of visual arts programs in the schools, including the national and state standards with assessment methodology. Also a supervised clinical experience in the school art classrooms of 40 hours provides strategies to teach art in grades K-12. Observation and participation in classroom settings is required to focus on classroom management and conflict resolution. Prerequisites: ARTE U429 and admission to the professional program in art education.

ARTE U459. Art Education Senior Seminar (3) Capstone experience intended to provide an opportunity for teacher candidates to pull together and reflect upon what was learned. Major capstone project required. Prerequisites: admission to the professional program and approved application to directed teaching. Corequisite: ARTE U460.

ARTE U460. Directed Teaching in Art Education (12) A supervised clinical experience consisting of 14 weeks in school setting, normally with 50% in elementary level and the remaining 50% in the middle or secondary settings. Candidates participate in regular seminars where they (1) analyze problems relating to their K-12 experiences; (2) explore ethical and legal issues related to teaching; (3) consider current issues and trends in K-12 education; and (4) complete their professional portfolios. Prerequisite: approved application for directed teaching. Corequisite: ARTE U459. Pass/Fail credit.

ART HISTORY (ARTH)

ARTH U101. Introduction to Art (3) Formal, historical and iconographic analysis of architectural monuments, paintings and sculpture; aspects of various theories of art and architecture.

ARTH U105. History of Western Art: Prehistory-Middle Ages (3) Survey of the visual arts from Paleolithic times to the Medieval period, with emphasis on the major civilizations of Egypt, the Ancient Near East, Rome, Byzantium and Medieval Europe.

ARTH U106. History of Western Art: Renaissance-Present (3) Survey of the visual arts in Western civilizations from the Renaissance to the present.

ARTH U301. Women and Art (3) Art by women and about women as it relates to issues of gender and sexual identity and how these intersect with social and historical constructions of race and class. Emphasis is on reading, research and written material. Prerequisite: ENGL U102.

ARTH U302. African-American Art (3) Survey of visual art produced by people of African descent in the United States from the 17th century to the present. Prerequisite: ENGL U102.

ARTH U304. Southern Folk Art (3) Techniques and traditions of Southern folk art concentrating on artists of South Carolina. Prerequisite: ENGL U102.

ARTH U305. American Art (3) Colonial era to the present. Particular attention is paid to the relationship of the visual arts to social and political history and to the way visual culture shaped early ideas about nationhood. Emphasis is on reading, research and written material. Prerequisite: ENGL U102.

ARTH U306. Twentieth Century Art (3) Major developments in art of the past century. International perspectives are stressed as are social, political and intellectual contexts. Emphasis is on reading, research and written material. Prerequisites: ARTH U106 or ARTH U305 or consent of instructor.

ARTH U308. History of Design (3) From the Industrial Revolution to the present. The social, cultural, economic, political, technical and aesthetic contexts of design are explored. Emphasis is on reading, research and written material. Prerequisites: ARTH U106 or 305 or consent of instructor.

ARTH U309. History of Photography (3) How photographs create meaning in and are given meaning by their social and historical contexts from the 1830s to the present. Emphasis is on reading, research and written material. Prerequisites: ARTH U106 or 305 or JOUR U201 or 302.

ARTH U310. African Art (3) Prehistory to the present. Particular attention is paid to the complexity of African cultures and to the social roles that art fills in the lives of its makers and consumers. Emphasis is on reading, research and written material. Prerequisite: ENGL U102.

ARTH U350. Art History Study Abroad (3-6) Travel in selected regions outside the United States, and field study of historical and contemporary art and artists, with emphasis on art history.

ARTH U352. Art History Field Study (3) Critical examination of major developments in contemporary art involving travel to major metropolitan areas in the United States. Course may be taken twice if the city is different. Emphasis is on reading, research and written material. Prerequisite: three hours of art history credit or consent of instructor.

ARTH U398. Selected Topics in Art History (3) Intensive study of selected topics in art history.

ARTH U399. Independent Study (3) Design and development of research projects of a complex and extensive nature. A student may repeat ARTH U399 with a different independent study contract description for a total of no more than six hours of undergraduate credit. Prerequisites: Junior level standing and consent of the instructor.

ARTH U400. Art Theory and Criticism (3) Philosophical and historical underpinnings of art history, theory and criticism. Advanced readings address traditional analytical models and new theories generated by modernism and postmodernism. Emphasis is on reading, research and written material. Prerequisites: six hours of art history credit or consent of instructor.

ARTH U450. Art History Study Abroad II (3-6) Travel in selected regions outside the United States, and advanced field study of historical and contemporary art and artists, with emphasis on art history. Prerequisite: six credit hours of art or consent of the instructor.

ARTH U499. Art History Internship (3-6) Supervised work experience in an art history related environment, resulting in a meaningful project/activity for the employing firm and a scholarly project for the student. For three internship credit hours, a minimum of 135 hours of scheduled work, periodic class meetings and consultation with the instructor are required. A contractual agreement signed by the employer, the student, the instructor, the dean of the college is mandatory. Standard grading. A student may repeat ARTH U499 with a different internship description for a total of no more than six hours of undergraduate credit. Prerequisites: Junior level standing with six hours in art history or consent of the instructor.

ART STUDIO (ARTS)

ARTS U103. Fundamentals of Two Dimensional Design (3) Introduction to visual thinking and principles of two-dimensional design, including line, form, space, texture, color and basic technical skills.

ARTS U104. Fundamentals of Three Dimensional Design (3) Introduction to visual thinking and principles of three-dimensional design, including form, volume and space.

ARTS U108. Computer Graphics I (3) Introduction to the hardware and software used in creating graphic design and illustration.

ARTS U110. Drawing I (3) Introduction to the materials and techniques of drawing, emphasizing visual perception and drawing skills.

ARTS U201. Graphic Design Studies (3) Social, cultural, political, technical, and artistic frameworks that comprise the discipline of graphic design. Emphasis on reading, research and written material. Prerequisite: ENGL U101 or consent of instructor.

ARTS U202. Ceramics I (3) Process of forming, decorating, glazing and firing. Prerequisite: ARTS U104 or consent of instructor.

ARTS U203. Color and Composition (3) Color theory and compositional systems. Prerequisite: ARTS U103 or consent of instructor.

ARTS U204. Three Dimensional Studies II (3) Materials and techniques of three dimensional design and sculpture beyond the introductory level. Prerequisite: ARTS U104 or consent of instructor.

ARTS U205. Digital Art I (3) Creative approaches to developing fine art projects at the intermediate level using raster and vector computer graphics. Projects emphasize image development, two and three-dimensional design solutions and content. Prerequisites: ARTS U108 or consent of instructor.

ARTS U206. Illustration I (3) Introduction to illustration with an emphasis on visual problem solving, creativity, effective communication and aesthetics. Visual skills are defined through exploration of various media resulting in appropriate visual solutions for illustration communication. Prerequisite: ARTS U103, ARTS U210, or consent of instructor.

ARTS U207. Printmaking I (3) Materials and techniques of major printmaking processes in historical and contemporary application. Techniques include relief, intaglio, lithography and monotype. Prerequisite: ARTS U203 or consent of instructor.

ARTS U210. Drawing II (3) Materials and techniques of drawing beyond the introductory level. Prerequisite: ARTS U110 or consent of instructor.

ARTS U211. Introduction to Painting (3) Materials and techniques of painting, emphasizing color theory, compositional structures, content, and expression. Prerequisite: ARTS U203 or consent of instructor.

ARTS U214. Graphic Design I (3) Creative problem-solving with emphasis on 2-D solutions to conceptual problems; translation of concept into form using word, image and layout; introduction to history of graphic design and typography. Prerequisites: ARTS U108. Prerequisite or corequisite: ARTS U110 or consent of the instructor.

ARTS U228. Business for the Visual Artist (3) Aspects of business relevant to the visual artist, emphasizing basic accounting and taxes; marketing and promotion; copyrights; sales by artist, gallery, or agent; and contracts. Feedback is received through class discussions and exercises, written examinations, and a final team project. Prerequisites: six hours of art history and/or art studio or consent of instructor.

ARTS U229. Introduction to Crafts (3) Traditional craft media: techniques, design and contemporary concepts.

ARTS U231. Introduction to Life Drawing (3) Emphasis on visual perception and skills of life drawing from the live model in a variety of media, using both clothed and unclothed male and female models. Prerequisite: ARTS U210 or consent of instructor.

ARTS U255. Art Practicum (1) Participation in art profession activities including, but not limited to, portfolio preparation, artist statement, artist bio, resume preparation, framing and presentation procedures, photographing and documentation of work, exhibition procedures, personal promotion, webpages and blogs. Regular weekly class meetings. Pass/fail grading scale.

ARTS U261. Introduction to Photography (3) Techniques and procedures of photography, including processing. Prerequisite: ARTS U103 or consent of instructor.

ARTS U262. Digital Photography (3) Technical, aesthetic and conceptual procedures of digital photography including composing, shooting, processing, manipulation and printing. Prerequisite: ARTS U108 or consent of instructor.

ARTS U302. Ceramics II (3) Ceramic processes and techniques and technical investigation in clay bodies and glazes with emphasis on the wheel throwing technique. Prerequisite: ARTS U202 or consent of instructor.

ARTS U305. Digital Art II (3) Creative approaches to developing fine art projects at the advanced level using raster and vector computer graphics. Projects emphasize personal image development, two and three-dimensional design solutions, and content. Prerequisite: ARTS U205 or consent of instructor.

ARTS U306. Illustration II (3) Continued exploration of visual communication with an emphasis on concept and professional quality of work. Prerequisite: ARTS U206 or consent of instructor.

ARTS U307. Printmaking II (3) Intermediate application of materials and techniques of major printmaking processes in historical and contemporary application. Emphasis is on content, individual expression, and series development. Prerequisite: ARTS U207 or consent of instructor.

ARTS U311. Painting II (3) Intermediate application of materials and techniques of painting processes using representational and non-representational subject matter. Emphasis is on content and individual expression. Prerequisite: ARTS U211 or consent of instructor.

ARTS U314. Graphic Design II (3) Continuation of translation of concept into form with emphasis on typography, letterforms, typographic syntax and type specification. Prerequisite or corequisite: ARTS U214 or consent of instructor.

ARTS U315. Graphic Design III (3) Advanced design problems with emphasis on individual development and exploration of contemporary design issues. Prerequisite: ARTS U214, ARTS U314 or consent of instructor.

ARTS U318. Interface Design I (3) Introduction to technical and aesthetic concepts and problem solving of interface design including but not limited to web design, CD ROM design, collection and preparation for basic assets (graphics, video, sound). Prerequisite: ARTS U214 or consent of instructor.

ARTS U350. Art Study Abroad (3-6) Travel in selected regions outside the United States, and field study of historical and contemporary art and artists with emphasis on studio techniques.

ARTS U361. Photography II (3) Technical, historical and aesthetic aspects of photography. Projects allow the development of personal imagery and technique. Prerequisite: ARTS U261 or consent of instructor.

ARTS U391. Motion Graphic Design (3) Introduction to animated interface design as applied to the graphic design and communications industry. Prerequisite: ARTS U318 or consent of instructor.

ARTS U398. Special Topics in Art (3) Intensive study of selected topics in art. Prerequisites: junior level standing with six hours in art or consent of the instructor.

ARTS U399. Independent Study (1-6) Opportunities to design and develop projects of a complex and extensive nature in keeping with the student's major creative inter-

ests. A student may repeat ARTS U399 with a different independent study contract description for a total of no more than six hours of undergraduate credit. Prerequisite: Junior level standing and consent of instructor.

ARTS U414. Directed Projects in Graphic Design (3) Graphic problem solving in the community/business environment; advanced production techniques for the graphic designer; research of critical design issues. Prerequisite: ARTS U314 or consent of instructor.

ARTS U418. Interface Design II (3) Intermediate interface design with emphasis on individual development and exploration of contemporary technical and aesthetic design issues including but not limited to web design, CD ROM design, collection and preparation of basic assets (graphics, video, sound). Prerequisite: ARTS U318 or consent of instructor.

ARTS U450. Art Study Abroad II (3-6) Travel in selected regions outside the United States, and advanced field study of historical and contemporary art and artists, with emphasis on studio techniques. Prerequisite: six credit hours of art or consent of the instructor.

ARTS U490. Senior Seminar Graphic Design (3) Portfolio finalization, preparation of student identity systems, oral presentation, and exploration of current ethical and occupational issues. Prerequisite: ARTS U315 and nine credit hours from the ARTS Uprofessional options courses or consent of instructor.

ARTS U499. Art Studio Internship (3-6) Supervised work experience in an art environment, resulting in a meaningful project/activity for the employing firm and a scholarly project for the student. For three internship credit hours, a minimum of 135 hours of scheduled work, periodic class meetings and consultation with the instructor are required. A contractual agreement signed by the employer, the student, the instructor, and the dean of the college is mandatory. Standard grading. A student may repeat ARTS U499 with a different internship description for a total of no more than six hours of undergraduate credit. Prerequisites: Junior level standing with 6 hours in art or consent of the instructor.

ASTRONOMY (ASTR)

ASTR U111. Descriptive Astronomy (3) The universe: physical processes and methods of study. (ASTR U111L is available for additional credit.)

ASTR U111L. Descriptive Astronomy Laboratory (1) Demonstrations, exercises and night viewings. Three hours per week. Prerequisite or Corequisite: ASTR U111.

BIOLOGY (BIOL)

BIOL U101. Introductory Biology I (4) Fundamental principles of biology, including the scientific method, biochemistry, cellular respiration, photosynthesis, genetics, and cellular and molecular biology. Designed for science majors. Three class and three laboratory hours per week. Prerequisite: MATH U120 or higher (except statistics) or higher placement in MATH. For students who place in MATH U121, an expanded version of introductory biology (BIOL U101A) with a non-credit meeting is mandatory, to provide supplemental instruction and practice.

BIOL U102. Introductory Biology II (4) Fundamental principles of biology, including population genetics, evolution, systematics, and the diversity of life. Dissection of preserved specimens is required in laboratory. Prerequisite: BIOL U101. Designed for science majors. Three class and three laboratory hours per week.

BIOL U110. General Biology (4) Current principles of cell biology, biochemistry, genetics, reproduction, development, and plant and animal diversity, as well as societal concerns. Not for major credit. Three class and three laboratory hours per week.

BIOL U205. Introduction to Field Ornithology (3) Basic morphology, ecology, behavior, evolution, identification, and natural history of birds with emphasis on the major groups and species found in South Carolina. Local and regional weekly field trips, including a weekend long trip focused on coastal and marine species identification and their natural history, are required. Biology U205/U305 will be offered concurrently. Projects for students enrolled in BIOL U305 will be more in depth and the standard for grading will be more demanding. Students may not receive credit for both courses. Biology U205 cannot be taken for major credit. Prerequisites: Consent of instructor.

BIOL U205L. Introduction to Field Ornithology Laboratory (1) Additional hours in the application of avian field identification techniques and in the observation of the natural history traits and characteristics of the common and important birds of South Carolina and vicinity. Biology U205L/U305L will be offered concurrently. Projects for students enrolled in BIOL U305L will be more in depth and the standard for grading will be more demanding. Students may not receive credit for both courses. BIOL U205L cannot be taken for major credit. Pre- or Corequisite: BIOL U205 or consent of instructor.

BIOL U206. Genetics and Society (3) Fundamentals of genetics, with an emphasis on human genetics; relevance of recent advances and concerns in contemporary society related to genetic technology. Not for major credit.

BIOL U232. Human Anatomy (4) Gross and microscopic

structure of the systems of the human body including essential technical terminology. Not for major credit. Three class and three laboratory hours per week.

BIOL U240. Human Biology and Society (3) Fundamentals of functional human biology; development of a relevant knowledge of medical issues and concerns in contemporary society such as cloning, emerging diseases, genetic testing, cancer, emphysema, organ transplants and cardiovascular disease. Not for major credit.

BIOL U242. Human Physiology (4) Functions of systems of the body emphasizing homeostasis, biochemistry and control mechanisms. Three class and three laboratory hours per week. Not for major credit. Prerequisite: BIOL U232, and CHEM U109 or CHEM U111.

BIOL U270. Environmental Science (3) The interrelationship of humans and their environment emphasizing the impact of pollution on human health. Not for major credit.

BIOL U301. Introduction to Ecology and Evolutionary Biology (4) Basic, applied, and theoretical ecology and the foundations of evolutionary biology. Laboratories illustrate lecture concepts and provide experience with fundamental skills of biostatistics, hypothesis testing, and scientific writing. Three classes and three laboratory hours per week. Prerequisites: BIOL U101 and U102 with a C or better.

BIOL U302. Introduction to Cell and Molecular Biology (4) Basic principles of the origin, evolution, function and diversity of cells. Emphasis is placed on molecular level approaches to the scientific study of eukaryotic cell function, physiology, metabolism, ultrastructure, and evolution, as well as the use of cells relevant to medical, biosocial, and bioenvironmental issues. Three class and three laboratory hours per week. Prerequisite: BIOL U101, U102, CHEM U111 with a minimum grade of C.

Note: All BIOL upper-division courses (with the exceptions of BIOL U330, U370, U581 and U582) require the completion of BIOL U101, U102, U301 and BIOL U302 with a grade of C or better as a prerequisite.

BIOL U305. Field Ornithology (3) Basic morphology, ecology, behavior, evolution, identification, and natural history of birds with emphasis on the major groups and species found in South Carolina. Local and regional weekly field trips, including a weekend long trip focused on coastal and marine species identification and their natural history, are required. Biology U205/U305 will be offered concurrently. Projects for students enrolled in BIOL U305 will be more in depth and the standard for grading will be more demanding. Students may not receive credit for both courses. Biology U205 cannot be taken for major credit. Prerequisites: BIOL U301 and U302 with a grade of C or better.

BIOL U305L. Field Ornithology Laboratory (1) Additional hours in the application of avian field identification techniques and in the observation of the natural history traits and characteristics of the common and important birds of South Carolina and vicinity. Biology U205L/U305L will be offered concurrently. Projects for students enrolled in BIOL U305L will be more in depth and the standard for grading will be more demanding. Students may not receive credit for both courses. BIOL U205L cannot be taken for major credit. Pre- or Corequisite: BIOL U305 or consent of instructor.

BIOL U310. Invertebrate Zoology (4) Phylogenetic and comparative aspects of anatomy, physiology, ecology, reproduction and embryology of the invertebrates. Dissection of preserved specimens is required. Three class and three laboratory hours per week. Prerequisites: BIOL U301 and U302 with a grade of C or better.

BIOL U315. Comparative Vertebrate Anatomy (4) Phylogenetic and comparative aspects of structure, development, and evolution. Dissection of preserved specimens is required. Three class and three laboratory hours per week. Prerequisites: BIOL U301 and U302 with a C or better, or consent of instructor.

BIOL U320. General Botany (4) Phylogenetic survey of the morphology, anatomy, and taxonomy of the major plant divisions. Three lecture and three laboratory hours per week. Prerequisites: BIOL U301 and U302 with a C or better.

BIOL U330. Microbiology (4) Introduction to bacteria and viruses, emphasizing morphology, pathogenic microbes, antigen-antibody relationships, and antimicrobial agents in chemotherapy. Three class and three laboratory hours per week. Prerequisites: four hours of biological science and CHEM U109 or CHEM U111 or consent of instructor.

BIOL U350. Genetics (4) Basic principles of transmission, molecular and population genetics. Three class and three laboratory hours per week. Prerequisites: BIOL U301 and U302 with a C or better.

BIOL U360. Comparative Animal Physiology (4) Comparative aspects of physiological processes underlying animal form and function. Emphasis placed on understanding physiological responses and adaptations used by animals. Three class and three laboratory hours per week. Prerequisites: BIOL U301 and U302 with a C or better, completion of BIOL U315 recommended but not required.

BIOL U370. Pathophysiology (3) Disruptions of normal physiology, processes that bring about disruptions, and

manifestations of disruptions. Prerequisites: BIOL U301, U302 and U360 or acceptance to the nursing program and completion of BIOL U242 and U330.

BIOL U375. Evolutionary Biology (4) Historical development of evolutionary theory; natural and sexual selection; micro and macroevolution; mass extinctions; current concepts of phylogeny and systematics; human evolution. Laboratories illustrate lecture concepts as well as readings from the primary literature. Three class and three laboratory hours per week. Prerequisite: BIOL U301 and U302 with a C or better.

BIOL U380. Biogeography (4) The distribution of plant and animal species and the ecological, biological and geographic phenomena controlling such patterning. Labs may include weekend field trips. Three class and three laboratory hours per week. Prerequisites: BIOL U301 and U302 with a C or better.

BIOL U390. Gross Human Anatomy (3) An investigation of human anatomy using cadaver dissection in a laboratory setting. Prerequisite: BIOL U301 and U302 with a C or better and BIOL U315.

BIOL U395. Internship in Biological Science (1-3) Supervised work experience in biological science. A minimum of three hours work per week is required for each credit hour. A contractual agreement signed by the supervisor, the student, the instructor, and the division chair is required. Prerequisite: junior or senior standing, BIOL U301 and U302 with a C or better. Pass/fail credit.

BIOL U398. Topics in Biology (1-3) Intensive study in selected areas. Individual topics are announced. Prerequisite: BIOL U301 and U302 with a C or better.

BIOL U399. Independent Study (1-3) Directed research project. Prerequisite: BIOL U301 and U302 with a C or better. Not for major credit.

BIOL U507. Developmental Biology (4) Morphogenetic patterns of embryonic development along with their molecular and cellular bases; and mechanisms of differentiation. Three class and three laboratory hours per week. Prerequisites: BIOL U301 and U302 with a C or better.

BIOL U525. Plant Taxonomy (4) The major classes of vascular plants found in South Carolina with an emphasis placed on plant reproductive biology, evolutionary relationships among groups, and species identification skills. Three class and three laboratory hours per week. Prerequisites: BIOL U301 and U302 with a C or better.

BIOL U530. Histology (4) The microscopic anatomy of human cells, tissues and organs. Three class and three

laboratory hours per week. Prerequisites: BIOL U301 and U302 with a C or better and CHEM U112.

BIOL U531. Parasitology (4) Parasites of animals, with emphasis on the immunological, clinical and epidemiological aspects of human parasitism. Dissection of specimens is required. Three class and three laboratory hours per week. Prerequisites: BIOL U301 and U302 with a C or better, CHEM U112.

BIOL U534. Animal Behavior (4) Identification and classification of behavior patterns exhibited by various species of animals; the development of behavior; proximate and ultimate causes of behavior. Three hours class and three hours laboratory per week. Prerequisites: BIOL U301 and U302 with a C or better and PSYC U101.

BIOL U535. Neurobiology (4) Introduction to neuroanatomical-functional relationships. Topics include the anatomical organization of major nuclei and tracts, neurochemical mechanisms, and neural integration of behavior. Three class and three laboratory hours/week. Prerequisites: BIOL U301 and U302 with a C or better.

BIOL U540. Immunology (4) Introduction to the molecular and cellular basis of the immune response. Topics include anatomy of the lymphoid system, and innate immune response, lymphocyte biology, antigen-antibody interactions, humoral and cellular effector mechanisms; control of immune responses, and the evolution of immunodefense mechanisms. Three class and three laboratory hours per week. Prerequisites: BIOL U301, U302 and CHEM U112 with a C or better. Pre- or Corequisite: BIOL U330 or U350.

BIOL U550. Molecular Cell Biology (4) Structure and functions of nucleic acids and proteins; molecular arrangement of prokaryotic, and eukaryotic genomes; the processes of DNA replication, DNA repair, gene transcription, and protein translation; control and coordination of gene activity as they relate to cellular processes in normal and disease states. Techniques used in contemporary molecular biology labs including recombinant DNA, electrophoresis of nucleic acids and proteins, Western blotting, and bioinformatics are covered in the laboratory. Three class and three laboratory hours per week. Prerequisites: BIOL U301 and U302 with a C or better, and eight hours of chemistry.

BIOL U570. Principles of Ecology (4) Interactions of organisms and the environment; ecosystems structure and functions. Three class and three laboratory hours per week. Prerequisite: BIOL U301 and U302 with a C or better.

BIOL U581. Biochemistry I (3) (=CHEM U581) Structure and function of the major classes of biological compounds and biological membranes. Content includes

a kinetic and equilibrium based approach to biological transport and catalysis, signaling, and an introduction to bioenergetics. Prerequisite: CHEM U332 or consent of instructor.

BIOL U582. Biochemistry II (3) (=CHEM U582) Chemistry of biological information pathways. DNA, RNA, and protein metabolism, organization of genes on chromosomes, regulation of gene expression, and applications of these topics to biotechnology problems are covered. Prerequisite: BIOL U581/CHEM U581 or consent of instructor.

BIOL U583L. Biochemistry Laboratory (1) (=CHEM U583L) A survey of laboratory methods in biochemistry. Three laboratory hours per week. Prerequisite or corequisite: BIOL/CHEM U581 or U582.

BIOL U599. Senior Seminar (3) Integration of biological knowledge at an advanced level and exploration of ethical issues. Prerequisites: statistics, SPCH U201, and a minimum grade of C in BIOL U301, U302, and 12 hours of additional biology coursework at the 300 level or above.

Business Administration

Note: Students seeking a degree in business must be admitted to the Professional Program (Upper Division) before enrolling in 300-level and above business administration and economics courses. Students not majoring in business must have 54 credit hours earned to take 300-level and above business administration and economics courses. Additional prerequisites are included in individual course descriptions. Students not majoring in business can enroll in no more than 29 semester hours of Johnson College of Business and Economics courses, excluding ECON U221, U222, U291, and U292.

ACCOUNTING (ACCT)

ACCT U225. Financial Accounting (3) Principles of external financial reporting for business entities, including income measurement and determination of financial position. Prerequisites: MATH U120 or U121 or U126.

ACCT U226. Managerial Accounting (3) Attention-directing and problem solving functions of accounting in relation to planning and control, evaluation of performance, and special decisions. Prerequisite: ACCT U225.

ACCT U331. Intermediate Accounting I (3) Financial accounting theory and practice as they relate to generally accepted accounting principles and the accounting standard codification. Included are external financial reports with emphasis on the balance sheet and the income statement. Emphasis is placed on differences between US and international standards. Prerequisites: 54 credit hours earned and ACCT U226.

ACCT U332. Intermediate Accounting II (3) Expands upon the financial accounting concepts and principles in Intermediate Accounting I and the accounting standard codification. Key concepts include current liabilities, bonds, earnings per share, pensions, leases, and stockholders' equity. Emphasis is placed on differences between US and international standards. Prerequisites: 54 credit hours earned and ACCT U331 with a minimum grade of C.

ACCT U333. Accounting for Decision-making and Control (3) Application of cost accounting concepts and information used by business organizations to make strategic organizational and operational decisions. Topics include the role of planning and control in attaining organizational goals and objectives; the relationship among cost structures, cost behavior, and operating income; differential analysis in decision-making and ethical issues for accountants. Prerequisites: 54 credit hours earned and ACCT U226.

ACCT U335. Individual Tax Planning (3) Federal income tax law as it relates to planning individual transactions to minimize income taxes. Includes preparation of individual tax returns. Prerequisites: 54 credit hours earned and ACCT U226.

ACCT U336. Governmental and Not-for-profit Accounting (3) Principles and procedures of accounting for the various funds of governmental and not-for-profit organizations and budgetary accounting for planning and controlling revenues and expenditures. Prerequisites: 54 credit hours earned and ACCT U225.

ACCT U347. Legal Environment of Business (3) Legal system; crimes and torts; consumer law, anti-trust, labor and employment law; environment and insurance; contracts and agency; business ethics; and international matters. Prerequisite: 54 credit hours earned.

ACCT U348. Issues in Commercial Law (3) Corporations, bankruptcy, and the Uniform Commercial Code. Prerequisites: 54 credit hours earned and ACCT U347.

ACCT U432. Advanced Federal Income Tax (3) Estates and trusts, partnerships, corporations, foreign income, gift, and social security taxes. Prerequisite: ACCT U335.

ACCT U433. Accounting Control Systems (3) Skills, tools and procedures needed to evaluate EDP controls. Program, system and business level controls are presented to show how the accounting, ethical and legal considerations should be integrated into the design of business accounting and auditing systems. Prerequisites: (ACCT U331 or ACCT U333) and (MGMT U290 or INFO U201).

ACCT U435. Auditing (3) Application of the basic concepts that underlie the financial statement audit process. The application of those concepts to audit and assurance

services as well as the reporting requirements of the independent auditor are examined. Prerequisites: ECON U292, ACCT U332; Prerequisite or Corequisite: ACCT U433.

ACCT U436. Advanced Auditing (3) Applications of auditing through case studies and computerized practice sets. Topics include audits of small businesses, forecasts, projections, compilations and the emerging nature of international auditing. Prerequisites: ACCT U435. Only offered in the summer.

ACCT U437. Advanced Accounting (3) Accounting for business combinations, consolidated financial statements, international transactions, including the use of derivatives in international business; accounting for partnership establishment and liquidation. Prerequisites: ACCT U332.

ACCT U438. Accounting Theory (3) Focused research using databases from the Financial Accounting Standards Board, the Securities and Exchange Commission, and the International Accounting Standards Board to interpret accounting problems. Prerequisites: ACCT U332 and senior standing. Only offered in the summer.

BUSINESS ADMINISTRATION (BADM)

BADM U298. Gateways to Business (3) Nature of business and business skills required for success in the twenty-first century. Business environments in the Upstate are discussed in relation to individual career goals.

BADM U398. Topics in Metropolitan Business Studies (3) Intensive study in contemporary areas of business such as corporate responsibility, cultural diversity and ethics. Topics are selected to meet current industry, faculty and student interest. Experiential learning is emphasized. May be repeated with permission of advisor. Prerequisite: 54 credit hours earned and MGMT U371.

BADM U399. Independent Study (1-6) Prerequisite: 54 credit hours earned.

BADM U478. Senior Seminar: Business Strategy (3) Understanding how the success of organizations relates to their “strategic level” decisions with an emphasis on risk management. Students experience hands-on application with case studies of actual businesses through team and individual exercises and individual presentations. Prerequisites: Senior standing and a grade of C or better in all JCBE upper-division business core courses.

BADM U499. Business Internship (1-6) Supervised work experience in the business environment resulting in a meaningful product for the employing firm and a scholarly project for the student. A minimum of 42 hours of scheduled work per one hour of academic credit, periodic class meetings, and individual consultation with the

instructor is required. A contractual agreement signed by the employer, the student, the instructor, and the dean is mandatory. Prerequisite: 54 credit hours earned—A student must have earned a minimum of 36 credit hours in business and economics courses and have an overall GPA of 2.5 or higher or a 2.5 GPA on twelve or more hours for the previous semester. Pass/fail credit.

FINANCE (FINA)

FINA U363. Business Finance (3) Basic concepts of finance related to decision-making. Prerequisites: 54 credit hours earned, ACCT U225 and ECON U291.

FINA U364. Financial Institutions and Markets (3) Financial institutions, various debt, equity, foreign exchange and derivative markets and instruments. Topics include security valuation, measures of risk, financial market innovation; the structure and role of commercial banks and other financial institutions, including types of risk financial institutions bear; utilization of financial markets, institutions, and instruments to manage risk. Prerequisite: 54 credit hours earned, and FINA U363.

FINA U365. Principles of Investments (3) The conceptual and analytical framework for formulating investment policies. An overview of the traditional securities markets for stocks, bonds, options, and non-traditional investment such as financial futures, commodities, and international markets is emphasized. Prerequisite: 54 credit hours earned and ACCT U225.

FINA U369. Personal Finance (3) Life insurance, health insurance, wills, trusts, social security, stocks, bonds, real estate, mutual funds, and other uses of funds. Prerequisite: 54 credit hours earned.

FINA U461. International Business Finance (3) Financial management of a multinational business enterprise. Topics include subsidiary working capital management, financial analysis of overseas ventures, sources of international capital, funds remittance policies, trade finance, exchange risk management policies, and techniques of financial control. Prerequisite: FINA U363.

MANAGEMENT (MGMT)

MGMT U290. Introduction to Business Information Systems (3) Fundamental information systems concepts and overview of information technology. Topics include: computer hardware, software, database management systems, telecommunications and networks, Internet concepts, decision support systems, electronic commerce, systems development, and information technology careers. Prerequisites: CSCI U138 or U141.

MGMT U371. Principles of Organizational Management (3) Survey of functions of management as they pertain to organizational efficiency and effectiveness using written assignments and class discussions to focus on group and individual dynamics, ethics, culture, leadership, decision-making, globalization, employee engagement, innovation and entrepreneurship, organizational change and workforce diversity. Prerequisite: 54 credit hours earned.

MGMT U372. Operations Management (3) Managing the direct resources required by the firm to create value through the production of goods, services and information. There is a strong emphasis on supporting the decision-making process throughout organizations with quantitative tools and techniques. Topics may include process selection, quality tools including an introduction to statistical process control, inventory management techniques and JIT systems, project management, simulation techniques, and waiting lines analysis. Prerequisites: 54 credit hours earned, ECON U291 and MATH U121 or equivalent.

MGMT U374. Management of Human Resources (3) Principles, concepts, and techniques for effective and efficient utilization of personnel including human resource planning, recruiting, selecting, training, developing, appraising, compensating, and legal issues. Prerequisite: 54 credit hours earned.

MGMT U377. Advanced Organizational Behavior (3) The study of the impact of individuals, groups and structure on behavior in a business organization in order to improve organizational performance. Prerequisites: 54 credit hours earned, and MGMT U371.

MGMT U378. The International Business Enterprise (3) Forces and forms in international business: globalization, multinationals, entrepreneurship, environment, culture, strategy, impact and future. Prerequisites: 54 credit hours earned and MGMT U371.

MGMT U390. Strategic Management of Information Systems (3) Strategic management and use of information systems (IS) in organizations. Topics include strategic use of IS resources, organizational impacts of IS use, IS and the design of work, IS and business processes, IS sourcing, IS governance, funding IS, managing IS projects, and IS related ethical issues. Prerequisites: 54 credit hours earned, MGMT U290 or CSCI U300 or INFO U201.

MGMT U471. New Business Enterprise (3) Combining business concepts for creation of new enterprises; experiential focus of developing description of product and/or services, marketing and operational plans, and structuring management and organization of the entity. Competencies include compilation of pro-forma financial statements, startup expenses, capitalization, balance sheet and capital structure, and projections of revenues, expenses, and cash

flows. Culminates in the presentation of a comprehensive business plan. Prerequisite: 54 credit hours earned and MKTG U350, FINA U363, MGMT U371.

MGMT U475. Advanced Operations Management (3) Theory and application of contemporary methods of managing production and service operations. Topics may include linear programming, forecasting, master planning, material requirements planning, aggregate planning, an introduction to lean systems, supply chain management, product and process innovation, and competitive strategies in a global market. Prerequisite: MGMT U372 and ECON U292 or equivalent.

MGMT U476. Process Improvement (3) Best practices for identifying, controlling, and improving the processes with which manufacturing and service organizations produce value. Topics may include problem solving, statistical process control, process capability, process improvement philosophy and strategies, advanced tools and applications for lean systems, and the Six Sigma methodology. Prerequisites: ECON U 292 or equivalent and MGMT U372.

MARKETING (MKTG)

MKTG U350. Principles of Marketing (3) Exchange relationships between buyers and sellers in a dynamic global marketplace. Focus areas include: environmental analysis, marketing research, buyer behavior, marketing strategy, business ethics, and the societal impacts of marketing activity of integrated marketing organizations. Prerequisite: 54 credit hours earned.

MKTG U351. Consumer Behavior (3) Consumer decision-making processes in a dynamic global marketplace. Selected concepts from psychology, sociology, economics, anthropology, and other behavioral disciplines are examined to develop a managerial perspective on predicting and interpreting consumer responses to marketing strategies. Prerequisites: 54 credit hours earned and MKTG U350.

MKTG U352. Marketing Communications (3) Selection and implementation of promotional strategies in a dynamic global marketplace. Focus areas include: integrated marketing communication processes, psychological, sociological and cultural factors influencing promotion decision making. Prerequisites: 54 credit hours earned and MKTG U350.

MKTG U353. Marketing Channels (3) Integration of business objectives with specific institutional characteristics to demonstrate marketing channel management as fundamental to success of the business enterprise. Research and the use of models in selected areas of channel management are emphasized. Prerequisite: MKTG U350.

MKTG U452. International Marketing (3) Selection of markets and the development of marketing strategy in

a dynamic global marketplace. The influences of different demographic, political, legal, cultural, competitive economic, technological, and natural environments are highlighted in order to conduct business across political borders. Prerequisites: MKTG U350.

MKTG U455. Topics in Marketing (3) Study in selected current topics in marketing. May be repeated with permission of advisor. Prerequisites: MKTG U350.

MKTG U456. Business Marketing (3) Industrial, governmental, and non-for-profit sector markets as distinguished from personal household consumption. The methods used by marketers to create marketing strategies throughout an integrated supply-chain in a dynamic global marketplace. Prerequisites: MKTG U350.

MKTG U457. Marketing Research (3) Research methods and procedures used in the marketing process. Particular emphasis is given to the sources of market data, sampling, preparation of questionnaires, collection and interpretation of data and the relation of market research to the policies and functions of the business enterprise. Emphasis is placed upon differences in life-style, beliefs and attitudes, and their influences upon the marketing decisions of the firm. Prerequisites: MKTG U350 and ECON U291 or equivalent.

MKTG U458. Marketing Management (3) Strategic marketing decision-making in integrated organizations competing in the dynamic global marketplace. Focus areas include: the policy areas of an organization, marketing research, marketing strategy, buyer behavior, forecasting, cost and profit analysis, and total quality management. Prerequisite: MKTG U350, 351 and one of the following: MKTG U352, MKTG U452, MKTG U455, MKTG U456, MKTG U457 or MKTG U459.

MKTG U459. Personal Selling and Sales Management (3) Development of personal selling skills and management of sales function. Focus areas include: preparation, prospecting, interviewing, trial closes, handling objections, closing after-sales support, recruitment, selection, motivation, training, and development, compensation, supervision, and other managerial topics. Prerequisites: MKTG U350.

NONPROFIT LEADERSHIP (NPAD)

NPAD U201. Nonprofit Leadership Workshop (1) Application of knowledge and skills reflecting essential nonprofit competencies of the Nonprofit Leadership Alliance Certification (CNP), practical experience in nonprofit organizations, leadership abilities, and meaningful service. Course is offered pass/fail and may be repeated for a maximum of 4 semester hours.

NPAD U301. The Nonprofit Sector in the United States (3) The importance of the nonprofit sector in the United States emphasizing the history, the relationship to business and government and the place of the nonprofit sector within American society generally. Prerequisite: Sophomore standing (30 semester hours).

NPAD U302. Nonprofit Leadership (3) The fundamentals of nonprofit administration to include leadership, legal foundations, board development, the role of volunteers, nonprofit advocacy and ethics.

NPAD U303. Nonprofit Financial Administration (3) Financial management within the nonprofit sector emphasizing strategic planning, budgeting, accountability, risk management and control. Prerequisite: NPAD U302 or consent of instructor.

NPAD U304. Fund Raising for Nonprofit Organizations (3) Fundamentals of resource development in the nonprofit sector including strategic planning, principles of philanthropy, proposal writing, event planning, and charitable trusts. Prerequisite: NPAD U302 or consent of instructor.

NPAD U399. Independent Study (1-4) An individualized, contracted program of study planned in conjunction with a faculty member. Prerequisites: NPAD U301 and consent of instructor.

NPAD U401. Topics in Nonprofit Leadership (3) Study in selected topics in nonprofit administration. Emphasis upon competencies necessary for emerging leaders in the nonprofit sector. May be repeated with permission of advisor. Prerequisites: 54 credit hours earned, NPAD U301 and NPAD U302.

NPAD U495. Nonprofit Senior Seminar (3) A capstone course in nonprofit administration emphasizing research and oral presentations. Prerequisites: NPAD U301, NPAD U302, NPAD U303, NPAD U499.

NPAD U499. Field Experience in Nonprofit Leadership (1-6) Supervised work experience in a nonprofit organization. Forty-five hours of work for each credit hour are required. Prerequisites: NPAD U301, junior or senior standing and consent of instructor. Pass/fail credit only.

CHEMISTRY (CHEM)

Note: Occupational Safety and Health Administration (OSHA) regulations require that everyone who enters chemistry laboratories wear safety goggles.

CHEM U101. Fundamental Chemistry I (4) Survey of inorganic and solution chemistry. Non-science majors

only. Three class, one recitation, and two laboratory hours per week.

CHEM U106. Chemistry and Society (3) General chemical fundamentals and how these principles apply to societal issues such as the environment, genetics and health. Recurring themes include critical evaluation of information from the media and the web, consideration of the risks and benefits of recent scientific advances for society. Non-science majors only. (CHEM U106 laboratory is available for additional credit.)

CHEM U106L. Chemistry and Society Laboratory (1) Experiments, exercises, and demonstrations to accompany CHEM U106. Three laboratory hours per week. Non-science majors only. Prerequisite or corequisite: CHEM U106.

CHEM U109. Chemistry of Living Things (4) Chemical principles including the structure of and energy associated with living matter; quantitative kinetic and equilibrium analysis of chemical and physical processes. The structure and function of biological macromolecules and the molecular basis of inheritance are surveyed. Non-science majors only. Three lecture, one recitation, and two laboratory hours per week. Prerequisite: MATH U120 or higher, except statistics, or higher placement in MATH. Prerequisite or corequisite: CSCI U138 or consent of instructor.

CHEM U111. General Chemistry (4) Chemical principles with emphasis on stoichiometry, atomic structure, bonding, and molecular structure. Three class, one recitation, and two laboratory hours per week. Prerequisite or corequisite: MATH U121 or higher, except statistics or consent of instructor.

CHEM U112. General Chemistry and Qualitative Analysis (4) Chemical equilibrium, acids and bases, oxidation-reduction, and inorganic qualitative analysis. Three class, one recitation, and three laboratory hours per week. Prerequisites: CHEM U111.

CHEM U211. Introduction to Organic Chemistry I (4) Survey of the chemistry of carbon compounds and introduction to the basic principles of organic chemistry. (Not for major credit in chemistry or biology).

CHEM U212. Introduction to Organic Chemistry II (4) A continuation of CHEM U211. Survey of the chemistry of carbon compounds and introduction to the basic principles of organic chemistry. (Not for major credit in chemistry or biology).

CHEM U321. Quantitative Analysis (3) Principles of gravimetric, volumetric, and basic instrumental methods of analysis. Three class hours per week. Prerequisite: CHEM U112.

CHEM U321L. Quantitative Analysis Laboratory (1) Practice of volumetric, gravimetric, and simple instrumental methods of analysis. Three laboratory hours per week. Corequisite: CHEM U321.

CHEM U331, 332. Organic Chemistry (3,3) Nomenclature, reactions, and syntheses of carbon compounds with emphasis on reaction mechanisms. Three class hours and one recitation hour per week. Prerequisite for U331: CHEM U112 or consent of instructor. Prerequisite or corequisite for U332: CHEM U331.

CHEM U331L, 332L. Organic Chemistry Laboratory (1,1) A survey of laboratory methods of organic chemistry. Three laboratory hours per week. Prerequisite or corequisite for U331L: CHEM U331. Prerequisites for U332L: CHEM U331L and CHEM U332 or concurrent enrollment in CHEM U332.

CHEM U395. Internship in Chemistry (1-3) Supervised work experience in chemistry. A minimum of three hours per week is required for each credit hour. A required contractual agreement is signed by the supervisor, the student, the instructor, and division chair. Prerequisite: junior or senior standing. Pass/fail credit.

CHEM U397. Junior Seminar (1) Searching and reading chemical literature and presentation of papers in a journal club format. Class meets with the chemistry Senior Seminar (CHEM U599) and presentations by CHEM U599 students will be observed. Prerequisite: CHEM U331, U331L. Corequisite: CHEM U321, U332, U332L.

CHEM U499. Undergraduate Research (1-3) Directed research project introducing the student to the methods of chemical research. A written report on work accomplished is required at the end of each semester. Research involves laboratory and/or library work as determined by the instructor. The student can sign up for 1-3 hours of research each semester with a maximum of 9 hours total credits for undergraduate research. (Not for major credit). Prerequisite: consent of instructor.

CHEM U511. Inorganic Chemistry (3) Atomic structure, molecular orbital theory, coordination compounds, redox chemistry, crystal structures, and a systematic study of the periodic table. Prerequisites: CHEM U321 and CHEM U331.

CHEM U512L. Inorganic Chemistry Laboratory (1) Syntheses with high pressure reactions, the use of unfamiliar solvents, high temperature and inert atmosphere, and the application of infrared, ultraviolet, nuclear magnetic resonance, and mass spectroscopy to inorganic chemistry. Three laboratory hours per week. Prerequisite: CHEM U331L. Prerequisite or corequisite: CHEM U511.

CHEM U522. Instrumental Methods of Analysis (4) Theory, instrumentation, and applications of modern instrumental techniques. Three class and three laboratory hours per week. Prerequisite: CHEM U321.

CHEM U530. Spectrometric Identification of Organic Compounds (3) Development and application of methods of obtaining and interpreting spectrometric data in terms of structural organic chemistry. Topics include infrared, ultraviolet, visible, and nuclear magnetic resonance spectroscopy. Prerequisite: CHEM U332 or consent of instructor.

CHEM U534. Polymer Chemistry (3) Fundamentals of macromolecular science with an emphasis on synthesis and characterization. Prerequisite: CHEM U332.

CHEM U541. Physical Chemistry I (3) Macroscopic systems including thermodynamics and chemical equilibrium. Prerequisites: CHEM U321, MATH U241 and PHYS U202. Co-registration in PHYS U212 is an alternative to having completed PHYS U202.

CHEM U541L. Physical Chemistry I Laboratory (1) Applications of physical chemical techniques to thermodynamics, chemical equilibrium and chemical kinetics. Three laboratory hours per week. Prerequisite: CHEM U321L. Corequisite: CHEM U541.

CHEM U542. Physical Chemistry II (3) Microscopic systems including quantum theory and its applications to electronic structure and spectroscopy. Prerequisite: CHEM U541.

CHEM U542L. Physical Chemistry II Laboratory (1) Applications of physical chemical techniques to quantum mechanics and spectroscopy. Three laboratory hours per week. Prerequisite: CHEM U541L. Corequisite: CHEM U542.

CHEM U581. Biochemistry I (3) (=BIOL U581) Structure and function of the major classes of biological compounds and biological membranes. Content includes a kinetic and equilibrium based approach to biological transport and catalysis, signaling, and an introduction to bioenergetics. Prerequisite: CHEM U332 or consent of instructor.

CHEM U582. Biochemistry II (3) (=BIOL U582) Chemistry of biological information pathways. DNA, RNA, and protein metabolism, organization of genes on chromosomes, regulation of gene expression, and applications of these topics to biotechnology problems are covered. Prerequisite: BIOL U581/CHEM U581 or consent of instructor.

CHEM U583L. Biochemistry Laboratory (1) (=BIOL U583L) A survey of laboratory methods in biochemistry. Three laboratory hours per week. Prerequisite or corequisite: CHEM U581 or U582.

CHEM U599. Senior Seminar (3) Integration and assessment of chemical knowledge at an advanced level, exploration of ethical issues, research, and oral presentation. Prerequisites: SPCH U201, CHEM U321, CHEM U332, CHEM U541 and one course from CHEM U511, U522, U530, U534, U581, U582.

CHILD ADVOCACY STUDIES (CAST)

CAST U301. Introduction to Child Maltreatment (3) Survey of major issues in child abuse and neglect. An overview of the impact of child maltreatment, prevention and intervention strategies, system response, and child advocacy are included. Prerequisites: SOCY U101 OR PSYC U101 OR CRJU U101, and at least sophomore standing; or consent of instructor.

CAST U401. Child Advocacy I: System Responses to Child Maltreatment (3) Child advocacy, and the response of child welfare and criminal justice professionals to child abuse and neglect. Identifying, investigating, and prosecuting child maltreatment are included. Supervised field experiences are required. Prerequisites: CAST U301; or consent of instructor.

CAST U402. Child Advocacy II: Prevention and Intervention Strategies (3) Intervention strategies, and multidisciplinary approaches to prevention, advocacy, and treatment of child maltreatment victims and survivors. Supervised field experiences are required. Prerequisites: CAST U301 or consent of instructor.

CAST U499. Child Advocacy Internship (3) Supervised work experience in a community agency working with victims and survivors of child maltreatment, and/or their families. Prerequisites: CAST U301, CAST U401, CAST U402, senior standing, and consent of instructor.

CHINESE (CHIN)

CHIN U 101. Introductory Chinese I (3) Fundamentals of the Mandarin Chinese language and culture through speaking, listening, reading and writing.

CHIN U 102. Introductory Chinese II (3) Fundamentals of the Mandarin Chinese language and culture through speaking, listening, reading and writing. Prerequisite: CHIN U101.

COMMUNICATION (COMM)

COMM U375. Communication Research Methods (3) Fundamentals of communications research methods and

applications. Topics include survey research, observational and experimental studies, primary research data-gathering techniques, secondary research sources, data analysis, message, market, competitive and audience research measures. Prerequisites: JOUR U201 and SPCH U201; or consent of the instructor.

COMM U399. Internship or Independent Study in Mass Communication (1-3) Supervised professional experience of research outside of the classroom. For three internship credit hours, a student is to work 135 hours with an approved agency; for two credit hours, 90 hours, for one credit, 45 hours. For an internship or for an independent study, a contract must be signed by the student and by the instructor of record and other designated faculty and administrators. A student may repeat COMM U399 once with a difference internship or independent study contract description for a total of no more than six hours of undergraduate credit. Prerequisites: JOUR U301, GPA 2.0 overall, 2.5 in major and consent of faculty supervisor.

COMM U490. Senior Seminar in Communications (3) Reading and research on selected topics in journalism, speech, and theatre designed to integrate knowledge, to explore ethical issues, and to gain experience in research and oral presentation. Prerequisite: COMM U375.

COMPUTER SCIENCE (CSCI)

CSCI U138. Introduction to Computer Technology (3) Introduction to graphical user interface, word processing, spreadsheet, database, Internet, cross-platform training, computer components and peripherals, input/output concepts, storage concepts, and computer buyer's guide considerations.

CSCI U139. Visual BASIC Programming I (3) Visual user interface design, event-driven programming using controls, variables, constants, calculations, decision structures, loop control structures, arrays, creating menus. Prerequisites: CSCI U138 or MGMT U290 or consent of instructor. **Not** for Computer Science major credit.

CSCI U150. Introduction to Computer Science (3) Current application, security and systems software, hardware devices, social and ethical issues in computing and information technology, propositional logic, search engines, and computer programming concepts. Basic problem solving, logic, and computer programming are introduced through an active learning environment. Prerequisite or Corequisite: MATH U126 or consent of instructor.

CSCI U200. Computer Science I (3) Design, analysis and testing of algorithms and classes, including programming from an Object-Oriented perspective, simple data types, control structures, arrays, file I/O, and complexity

analysis. Prerequisite: C or better in CSCI U150 or consent of instructor.

CSCI U210. Computer Organization (3) Computer organization, logic gates and expressions, circuits, CPU, memory, numbering systems, assembly language programming, instruction formats, and addressing modes. Prerequisite: C or better in CSCI U200 or consent of instructor.

CSCI U234. Visual BASIC Programming (3) Basic and advanced programming in **the Visual BASIC language including visual object** design, active-X objects, access to database objects, dynamic data exchange, and object linking and embedding. Prerequisite: C or better in CSCI U200 or consent of instructor.

CSCI U238. C++ Programming (3) Introduction to C++ as a second object-oriented language with concepts of OO programming, data abstraction, polymorphism, inheritance, graphical user interface design with MFC, and memory management issues. Prerequisite: C or better in CSCI U200 or consent of instructor.

CSCI U239. Visual BASIC Programming II for Non-Majors (3) Modular programming, algorithmic design, string manipulation, array processing, sequential and random file processing in the BASIC language. **Not** for Computer Science major credit. Prerequisites: CSCI U139 or consent of instructor.

CSCI U300. Computer Science II (3) Advanced design, analysis and testing of algorithms and classes, including inheritance, polymorphism, UML, complexity analysis, recursion, search and sorting techniques, linked lists, stacks and queues. Prerequisite: C or better in CSCI U200 or consent of instructor. Corequisite: MATH U174 or consent of instructor.

CSCI U310. Introduction to Computer Architecture (3) Computer organization and architecture, basic processor design, hard wired and microprogrammed control, ALU, memory organization, data paths, pipelining, and interfacing and communications. Prerequisite: C or better in CSCI U210 or consent of instructor.

CSCI U311. Information Systems Hardware and Software (3) An introduction to computer and systems architecture and operating systems for system development personnel. Topics include CPU architecture, instructions sets, memory, registers, input/output, and operating system modules such as process management, memory and file management. Prerequisite: C or better in CSCI U200 or consent of instructor.

CSCI U314. Industrial Robotics (3) Fundamental concepts of industrial robotics including kinematics, 3D coordinate transformation, robot motion, robot control

and sensing, robot programming, and computer vision. A review of new technologies for computer-integrated manufacturing, computer-aided design and computer-aided manufacturing, automated material handling, and flexible manufacturing systems is included. Students are required to write programs in order to demonstrate the laboratory projects. Prerequisites: C or better in CSCI U200 and MATH U127, or consent of instructor.

CSCI U315. Networking Technology (3) Basic concepts of computer networks, data telecommunication and distributed applications, including network topology, hardware, software, protocol, security, and the implications of network technologies on the deployment and implementation of networked systems. **Not** for CS or CIS major credit. Prerequisites: CSCI U300 or INFO U305 or consent of instructor.

CSCI U321. Computer Science III (3) Design, analysis and testing of advanced data structures, including priority queues, trees, binary search trees, tree traversals and balancing techniques, hashing, and graph theory. Prerequisites: C or better in both CSCI U300 and MATH U174 or consent of instructor.

CSCI U325. Fundamentals of Relational Database Management Systems (3) Basic architecture, structures, and query languages. Topics include design and implementation of RDBMS, relational data models, conceptual modeling, data independence, specification of data requirements, normalization, recovery and security. **Not** for CS or CIS major credit. Prerequisites: CSCI U300 or INFO U305 or consent of instructor.

CSCI U355. Digital Forensics (3) Methods, tools and techniques used to maximize efficiency in investigations that involve digital devices, including malicious code analysis, techniques of evaluation of the physical memory of a compromised machine, digital forensics tools, challenges of anti-forensics phenomena, and use and management of storage area network technology for evidence storage. Prerequisites: C or better in CSCI U300 and CSCI U311; or consent of instructor.

CSCI U370. Fundamentals of Bioinformatics (3) Computational methods, tools and techniques used to analyze, correlate, and extract information from biological, chemical and biomedical databases, including algorithms for sequence comparison, data mining for disease diagnosis, prediction of protein structure and function, and database management for biomedical data. Prerequisite: C or better in CSCI U321 or consent of instructor.

CSCI U399. Independent Study (1-9) As needed.

CSCI U412. Computer Networks I (3) Introduce the basic concepts needed to design, implement, and manage networks. Transmission media, topologies, local area and

wide area network technologies, communication protocols, standards, network architectures, security, and network operating systems are examined. Prerequisite: C or better in CSCI U300, or consent of instructor.

CSCI U421. Design and Analysis of Algorithms (3) Concepts and fundamental strategies of algorithm design; the analysis of computing time and memory requirements; the theory of computational complexity (NP-hard and NP-complete); graph manipulation algorithms (connected components, minimum spanning trees, traveling salesman, cycles in a graph, and coloring of graphs); search algorithms (depth-first, breadth-first, best-first, and alpha-beta minimax); and computational algorithms (matrix multiplication, systems of linear equations, expression evaluation, and sorting). Prerequisite: C or better in CSCI U321 or consent of instructor.

CSCI U441. Experiential Learning in Computer Science (3) Experience in a business, educational, or non-profit computing environment. May not be used for major credit in any major in computer science. Prerequisite: approval of the instructor. Pass/fail credit.

CSCI U450. E-Business Web Application Development (3) A project-oriented course involving the complete application development of an online commercial Web site. Basic Web page design, including HTML and Style Sheets is covered, but the focus is on what happens behind the scenes of a business Web site, including client versus server-side information processing, CGI and Event-Driven programming, data transmission, storage and compressions, risk analysis, and security issues. Prerequisite: C or better in CSCI U300 or consent of instructor.

CSCI U455. Computer Security (3) A survey of the fundamentals of information security, including risks and vulnerabilities, policy formation, controls and protection methods, database security, encryption, authentication technologies, host-based and network-based security issues, personnel and physical security issues, issues of law and privacy. Prerequisite: C or better in CSCI U300 or consent of instructor.

CSCI U456. Applied Cryptography (3) Symmetric-key cryptography, including Stream ciphers and Advanced Encryption Standard, password-based encryption, public-key cryptography, session-key encryption, digital signatures, hash functions, and message authentication codes. The hands-on laboratories provide extensive practice on file encryption using public-key cryptography, password storage and authentication by message digest, utilization of key transport and key agreement to establish secure channel for socket programming and RSA encryption implementation. Prerequisite: C or better in CSCI U321 or consent of instructor.

CSCI U499. Directed Research (3) An investigation of technical papers from the instructor's area of research.

The composition and presentation of technical papers that either survey the existing literature or make an original contribution to the research area is required. Prerequisites: C or better in CSCI U300 or consent of instructor.

CSCI U509. Topics in Computer Science (3) Selected topics of special interest in computer science. May be repeated for credit. Prerequisite: consent of instructor.

CSCI U511. Operating Systems (3) Introduces the fundamentals of operating systems design and implementation, including an overview of the components of an operating system, mutual exclusion and synchronization, I/O, interrupts, implementation of processes, scheduling algorithms, memory management, and file systems. Prerequisites: C or better in CSCI U210 and CSCI U321 or consent of instructor.

CSCI U512. Computer Networks II (3) Advanced topics in telecommunications, location positioning systems and computer networking, including wireless and mobile computing, integration of wireless and wired networks, design issues, packet transmission, datagram encapsulation and fragmentation, media access control, data transmission and retransmission, routing, bridging, switching, addressing error handling, flow control, data security, and local and wide-area networks. Prerequisites: C or better in CSCI U412 or consent of instructor.

CSCI U515. Wireless Networks (3) Fundamental concepts and techniques employed in wireless and mobile networks such as cellular networks, wireless LANs, and ad-hoc networks. Topics include wireless communication basics, access technologies, medium access control, naming and addressing, routing, mobility support and management, security, and power management. Prerequisite: C or better in CSCI U412 or consent of instructor.

CSCI U516. Distributed and Network Programming (3) Design and implementation of distributed application and network communication programs, including network application development with UCP and TCP/IP protocols, introduction to distributed systems and computing, RIM, socket programming, client/server models, and communication primitives, such as datagrams, packet retransmission, routing, addressing, error handling, and flow control. Prerequisite: C or better in CSCI U321 or consent of the instructor.

CSCI U520. Database System Design (3) Database Management System (DBMS) architecture and organization, design and implementation of DBMS, data models, internal databases structures, conceptual modeling, data independence, data definition language, data manipulation language, normalization, transaction processing, recovery, and security. Prerequisite: C or better in CSCI U300 or consent of instructor.

CSCI U521. Database Implementation, Application, and Administration (3) Design and implementation of database and client/server applications, in-depth treatments of embedded queries and stored procedures, database triggers, database extended languages, architectures and design patterns of distributed application, transaction processing, performance tuning, recovery and backups, auditing, and security. Prerequisite: C or better in CSCI U520 or consent of instructor.

CSCI U525. Knowledge Discovery and Data Mining (3) Extraction and discovery of knowledge from large databases, data integration and data warehousing, data mining algorithms, models, and applications including association rule mining information retrieve (IR) and mining of text databases, decision tree, decision rules, classification techniques, cluster analysis, and evaluation, visualization, and interpretation of patterns. Prerequisite: C or better in CSCI U300 or consent of instructor.

CSCI U526. Data Mining for Computer Security (3) Data mining algorithms and models, including association rule mining, decision trees, decision rules, classification techniques, cluster analysis, data mining tools for malware detection, active defense, inside threat detection and firewall policy analysis, data mining applications for misuse/signature detection, anomaly detection and scan detection and profiling network traffic. Prerequisite: C or better in CSCI U321 or consent of instructor.

CSCI U530. Programming Language Structures (3) Paradigms and fundamental concepts of programming languages, such as scope, binding, abstraction, encapsulation, typing, and language syntax and semantics. Functional and logic programming paradigms are also introduced through sample programming languages. Prerequisites: C or better in CSCI U210 and CSCI U321 or consent of instructor.

CSCI U540. Software Engineering (3) Methods and tools of software engineering, software life cycle, iterative development processes including the Agile Method and Unified Process, object oriented analysis and design of software, software testing, cost and effort estimation, project management, risk analysis, and documentation. A relatively large software system is developed in a team environment. Prerequisite: C or better in CSCI U321 or consent of instructor.

CSCI U555. Advanced Computer Security and Information Assurance (3) Cryptography, telecommunication and network security, applications and system development security, Business Continuity Planning (BCP), cyber-crimes and countermeasures. The hands-on laboratories provide extensive practices on firewalls, Virtual Private Networks (VPN), Intrusion Detection Systems (IDS), and other computer security tools. Prerequisite: C or better in CSCI U412 and CSCI U455; or consent of instructor.

CSCI U556. Web Development Security (3) Fundamental coverage of issues and techniques in developing secure web-based applications; related topics such as network security, web server security, application-level security and web database security, etc. The hands-on laboratories provide extensive practices on securing client-database communication, securing data in the database, and securing a large online application using X509 certificate and secure socket layer. Prerequisite: C or better in CSCI U321 and C or better in CSCI U456; or consent of instructor.

CSCI U560. Numerical Analysis (3) (=MATH U560) Difference calculus, direct and interactive techniques for matrix inversion, eigen value problems, numerical solutions of initial value problems in ordinary differential equations, stability, error analysis, and laboratory applications. Prerequisites: MATH U245 and U344, and programming competency.

CSCI U580. Introduction to Artificial Intelligence (3) Intelligent agents, expert systems, heuristic searching, knowledge representation and reasoning, artificial neural networks, ontologies, and natural language processing. Prerequisite: C or better in CSCI U321 or consent of instructor.

CSCI U585. Introduction to Computer Vision (3) Processing and analyzing features in still digital images, camera calibration, stereopsis, object recognition, the processing of edges, regions, shading and texture, and introductory video processing techniques. Prerequisites: C or better in CSCI U321 and MATH U141 or consent of instructor.

CSCI U599. Computer Science Senior Seminar (3) Integration of knowledge at an advanced level, a review of recent developments in theoretical and applied computer science, the exploration of ethical issues, along with research and oral presentation. Prerequisites: 12 hours of 300 level or above computer science courses and consent of instructor.

CRIMINAL JUSTICE (CRJU)

NOTE: *All criminal justice majors are required to complete CRJU U102 prior to enrolling in any CRJU course numbered 300 and above. This prerequisite does not apply to non-criminal justice majors.*

CRJU U101. Introduction to Criminal Justice (3) Survey of the law enforcement, judicial, correctional, and juvenile systems; interrelationships between criminal justice agencies and the community.

CRJU U102. Criminal Justice Writing Laboratory (3) Mechanics and skills of research writing applied to topics in criminal justice. Emphasis is placed on collecting

and communicating criminal justice research literature in writing style appropriate for the social sciences. For criminal justice majors only. Prerequisite or Corequisite: CRJU U101.

CRJU U210. Policing in America (3) Police organizations; the recruitment, training, and socialization of police officers; the role of police in society; and critical issues in policing. The problem of coercive power as it relates to policing is also examined. Prerequisite: CRJU U101.

CRJU U220. The Criminal Courts (3) The administration of criminal justice in the American federal and state court systems. The nature and concept of justice, court personnel, functions, jurisdictions, policies, procedures, discretion, and current developments in court technology and organization will be reviewed. Prerequisite: CRJU U101.

CRJU U230. Introduction to Corrections (3) Penology emphasizing the history, philosophy, programs, policies, and problems associated with correctional practice. Topics include probation, prisons, jails, parole, community corrections and alternative sanctions. Prerequisite: CRJU U101.

CRJU U301. Crime in America (3) Contemporary issues related to manifestations of crime, offenders, victims, justice system response, and societal trends. Emphasis placed on debunking misconceptions of crime and its correlates in media and society. Prerequisite: CRJU U101.

CRJU U317. Policing: Theories and Programs (3) The development of police organizational theories, practices and methods from the turn of the twentieth century to the twenty-first century. Major emphasis is on development and implementation of new programs and application to urban policing. Prerequisite: CRJU U101 and U210.

CRJU U321. Criminal Law (3) Origin and development of criminal law in America along with basic elements of crime and defenses. Prerequisite: CRJU U101.

CRJU U325. Criminal Trial Practice (3) The criminal trial, including the rules of evidence, trial strategy, opening statements, the presentation of evidence, arguing objections, closing arguments, and a critical analysis of the entire process. Prerequisites: CRJU U101 or consent of instructor.

CRJU U330. Institutional Corrections (3) Functions, structure, procedures and philosophy of American correctional institutions; constitutional limitations and the impact of law on correctional practices. Prerequisite: CRJU U101 and U230.

CRJU U333. Community-Based Corrections (3) Development and impact of community programs, halfway houses, group homes, work-release, and educational re-

lease programs, including the role of the community and citizens in the correctional process. Prerequisite: CRJU U101 and U230.

CRJU U343. The Juvenile Justice System (3) History, philosophy, and evaluation of the juvenile court, juvenile court practices and procedures; the role of the police, correctional alternatives, prevention and intervention strategies in the juvenile justice process. Prerequisite: CRJU U101 and either CRJU U210, CRJU U220, or CRJU U230, or consent of instructor.

CRJU U345. Juvenile Delinquency (3) (=SOCY U355) Social factors in the development, identification and treatments of delinquents and juvenile delinquency in the context of juvenile justice systems. Prerequisite: SOCY U101 and CRJU U101.

CRJU U350. Victimology (3) Forms of victimization, the role of victims in crimes, their treatment by the criminal justice system, their decisions to report crimes and help prosecute offenders, victim-offender mediation, and victim compensation. The national crime survey regarding patterns and trends in victimization is introduced. Prerequisite: CRJU U101.

CRJU U361. Criminal Justice Research Methods (3) Quantitative, qualitative and comparative methods used in criminal justice research, focusing on research design, data collection and analysis, and ethical issues. Prerequisites: CRJU U101, CRJU U210, CRJU U220 and CRJU U230.

CRJU U362. Criminal Justice Statistics (3) Basic principles of descriptive and inferential statistics as applied to topics in criminal justice, including correlation, probability, measures of central tendency and variability, hypothesis testing, and estimation. For criminal justice majors only. Prerequisites: CRJU U101 and MATH U120 or higher.

CRJU U371. Criminological Theory (3) Analysis and critical assessments of traditional and contemporary crime and theories of criminal behavior. Prerequisites: CRJU U101, CRJU U210, CRJU U220, and CRJU U230.

CRJU U 380. Special Populations and the Criminal Justice System (3) The experience of special populations including racial, ethnic and other historically marginalized groups in various roles within the criminal justice system. Prerequisite: CRJU U101 and either CRJU U210, U220 or U230.

CRJU U381. Alcohol, Drugs, and Public Policy (3) History and theories of alcohol and other drug use, types and effects of drugs, crime associated with drugs, prevention and treatment of abuse, and efforts to control and regulate drug use. Both past and present public policies for the control of licit and illicit drugs will be evaluated. Prerequisite: CRJU U101 or PSYC U101 or SOCY U101.

CRJU U382. Women and Crime (3) The traditional and contemporary explanations of female delinquency and criminality, the differential treatment accorded female defendants and victims, the nature of crime against women, the quality of state and federal correctional systems for women, and the status of females as criminal justice professionals. Prerequisite: CRJU U101.

CRJU U383. Comparative Criminal Justice Systems (3) International criminal justice systems, their legal foundations, current structures, and strategies of crime control. Prerequisite: CRJU U101.

CRJU U384. Child Sexual Exploitation and the Internet (3) Child sexual abuse and technology. Characteristics of sexual predators of children, their methods, the system response, and legal issues are included. Prerequisites: SOCY U101 or CRJU U101; or consent of instructor.

CRJU U385. Violence in Society (3) Theories, causes, consequences and prevention of violent acts. Topics include trends and patterns, violent offenders, typologies of violent behavior, social construction of violence, and criminal justice system response. Prerequisites: CRJU U101 and either CRJU U210, CRJU U220, or CRJU U230.

CRJU U399. Independent Study (1-3) A planned individual study program in conjunction with a Criminal Justice faculty member. Course may be repeated once with consent of advisor. Prerequisite: CRJU U101 and consent of instructor.

CRJU U401. Criminal Justice Administration (3) Problems, processes, and theories of communication, decision making, and control in criminal justice agencies. Prerequisite: CRJU U101, CRJU U210, CRJU U220, and CRJU U230.

CRJU U402. Civil Liability in Criminal Justice (3) Liability of criminal justice practitioners, agencies, municipalities, and other criminal justice entities including types of actions, defenses, damages, injunctions and other remedies for civil wrongs as mandated by state and federal law are included. Prerequisites: CRJU U210, CRJU U220, CRJU U230.

CRJU U403. Criminal Justice Ethics (3) Ethical issues confronted by criminal justice personnel and organizations. Standards and professional responsibilities of criminal justice practitioners are examined within the context of ethical dilemmas. Prerequisites: CRJU U101, CRJU U210, CRJU U220, and CRJU U230.

CRJU U420. Criminal Procedure (3) Laws and constitutional safeguards that govern the processing of criminal offenders from police investigation through post-conviction relief. Prerequisite: CRJU U101.

CRJU U474. Social Deviance (3) (=SOCY U351) Theories, methods, and substantive issues in the creation, involvement, recognition, and control of deviance. Pertinent research data is integrated in the context of contemporary societal issues. Prerequisite: SOCYU101 and CRJU U101.

CRJU U484. Selected Current Topics (3) A seminar for advanced students. May be repeated once with the consent of the adviser. Prerequisites: CRJU U101, CRJU U210, CRJU U220, and CRJU U230; or consent of instructor.

CRJU U490. Criminal Justice Internship (3-6) A planned program of observation, study and work in selected criminal justice and related agencies. Prerequisites: CRJU U101, CRJU U210, CRJU U220 and CRJU U230; minimum of 75 earned credit hours with at least 15 of these hours from USC Upstate, minimum GPA of 2.25 and consent of instructor.

CRJU U501. Senior Seminar (3) Exploration, at an advanced level, of issues, topics and dilemmas related to crime and the criminal justice system. The specific topics covered vary depending upon the instructor. Prerequisites: One statistics course, CRJU U101, CRJU U210, CRJU U220, CRJU U230, CRJU U361, and CRJU U371.

ECONOMICS (ECON)

ECON U221. Principles of Macroeconomics (3) Causes and effects of changes in economic aggregates, including gross domestic product, personal income, unemployment, and inflation. The role of economics in contemporary society and the effect of monetary and fiscal policy on the functioning of a free market system are explored. Prerequisite: MATH U120 or U121 or U126.

ECON U222. Principles of Microeconomics (3) Consumer demand, supply, and price in a free-market system. The economics of the firm is presented within the context of different market structures. Prerequisite: MATH U120 or U121 or U126.

ECON U291. Probability and Statistics (3) Concepts of probability, probability distributions, and sampling theory. Prerequisite: MATH U121.

ECON U292. Statistical Inference (3) Methods of statistical inference, including additional topics in hypothesis testing, linear statistical models, and time series analysis. Prerequisite: MATH U122 and ECON U291.

Note: Students seeking a degree in business must be admitted to the Professional Program (Upper Division) before enrolling in 300-level and above business administration and economics courses. Students not

majoring in business must have 54 credit hours earned to take 300-level and above business administration and economics courses. Additional prerequisites are included in individual course descriptions. Students not majoring in business can enroll in no more than 29 semester hours of Johnson College of Business and Economics courses, excluding ECON U221, U222, U291, and U292.

ECON U301. Money and Banking (3) History, structure, functions and operations of the American commercial and central banking system. Emphasis is placed on the influence and operations of the Federal Reserve System. Prerequisites: 54 credit hours earned, ECON U221, and FINA U363.

ECON U303. International Economics (3) Survey of international economic issues and institutions, including trade and protectionism, global and regional trade agreements, trade balances and exchange rates. Prerequisites: 54 credit hours earned, ECON U221 and U222.

ECON U311. Issues in Economics (3) Nature and causes of major economic problems facing the nation and its communities and policy alternatives designed to solve them, including the philosophy and methodology of economics in social problem solving. Prerequisites: 54 credit hours earned, ECON U221 and U222.

ECON U322. Intermediate Macroeconomic Theory (3) Classical, Keynesian, and post-Keynesian models. These models provide a framework for monetary and fiscal policy prescriptions to economic problems. Prerequisites: 54 credit hours earned and ECON U221.

ECON U326. Managerial Economics (3) Application of the economic theory of profits, competition, demand, and costs to the analysis of problems arising in the firm and in decision making. Price policies, forecasting, and investment decisions are among the topics considered. Prerequisites: 54 credit hours earned, ECON U222 and U292 or equivalent.

ECON U499. Topics in Economics (3) Selected topics in economics. Topics vary depending on available staff and interests of students. This course may be repeated for credit. Prerequisites: 54 credit hours earned, ECON U221 and U222.

Education

CURRICULUM AND INSTRUCTION (EDCI)

EDCI U300. Resources and Technology in Teaching (3) Proper and effective use of computer technology and audiovisual resources in education, including navigation

of portfolio software, construction of materials, location of resources, and operation of equipment. Prerequisite: CSCI U138 or consent of the instructor.

EDCI U490. Curriculum and Instruction Senior Seminar (12-15) A fourteen-week supervised internship experience in selected placement setting. Completion of this course does not qualify student for teacher certification recommendation. Prerequisite: Approved application for student teaching and permission by the School of Education Dean. Corequisite: Early Education majors EDEC U468; Special Education majors EDLD U449; and PE majors EDPH U460.

EARLY CHILDHOOD EDUCATION (EDEC)

EDEC U398. Topics in Early Childhood Education (1-3) Prerequisite: junior standing and consent of instructor.

EDEC U399. Independent Study (3) Prerequisite: junior standing and consent of instructor.

EDEC U410. Clinical I in Early Childhood Education (2) Supervised clinical experience in early childhood settings. Observation and participation in classroom settings is required with a focus on observing children's development and language use, observing types of programs, and assessing management styles and techniques. Seminars and group discussions included. Four laboratory hours per week. Prerequisite: admission to the professional program. Corequisite: EDEC U420, U422, U424, U445 and EDFO U485.

EDEC U420. The Young Child: Behavior and Development in Early Childhood (3) Intellectual, physical, social, and emotional development, prenatal through grade four, within ecological context. Critical thinking, creative expression, the parenting role and developmental diagnosis including assessment of development, normal and abnormal, will be addressed. Prerequisites: EDFO U333 or PSYC U302; admission to the professional program or consent of the instructor. Corequisites: EDEC U410, U422, U424, U445 and EDFO U485.

EDEC U422. Survey of Early Childhood Education (3) Programs for young children and the historical, social, economic, and philosophical influences on education. Attention is given to learning activities, materials, and equipment for kindergarten and primary grades. The assessment of readiness and maturation and the relationship of various subject areas to the child's development are emphasized. Prerequisite: admission to the professional program. Corequisites: EDEC U410, U420, U424, U445 and EDFO U485.

EDEC U424. Parent and Family Involvement in Early

Childhood Education (3). Principles, practices, and content of family dynamics including practices for evolving parents in early childhood settings. Corequisites: EDEC U410, U420, U422, U445 and EDFO U485.

EDEC U440. Clinical II in Early Childhood Education (2) Supervised clinical experience in early childhood settings. Observation and participation in classroom settings is required with a focus on math, science, reading, social studies and creative arts. Seminars and group discussions included. Four laboratory hours per week required. Prerequisite: admission to the professional program. Corequisites: EDRE U414, EDEC U446, U447, U448 and U449.

EDEC U445. Language Development and Communicative Skill (3) The relationship of language development and thinking to teaching the communicative skills to young children. Included are activities designed to develop oral language facility, writing (handwriting, spelling, functional, and creative writing), listening, and specific techniques dealing with diagnosis of language development. Students participate in a field based experience at a selected school site. Prerequisite: admission to the professional program. Corequisites: EDRE U414, EDEC U410, U420, U422, U424 and EDFO U485.

EDEC U446. Math for the Young Child (3) Materials and programs for teaching mathematics and the methods and theories for developing mathematics programs. Competence is gained in the selection, preparation, and presentation of materials. Prerequisite: MATH U231, MATH U232, MATH U233 and admission to the professional program. Corequisites: EDRE U414, EDEC U440, U447, U448 and U449.

EDEC U447. Social Studies for the Young Child (3) The selection, appropriate utilization, facilitation of development, and application of social science concepts to social problems and the socialization of children. Prerequisite: admission to the professional program. Corequisites: EDRE U414, EDEC U440, U446, U448 and U449.

EDEC U448. Science for the Young Child (3) Materials and programs for teaching science and the methods and theories of developing science programs. Competence is gained in the selection, preparation, and presentation of materials. Prerequisite: admission to the professional program. Corequisite: EDRE U414, EDEC U440, U446, U447 and U449.

EDEC U449. Creativity and Play (3) Theories of play and the development of play as central to children's learning. Knowledge and skills in structuring the classroom environment and curriculum experiences which will support and enrich a child's social, creative, and physical development in preprimary and primary school settings will be acquired. Multicultural perspectives and needs of

exceptional children addressed. Prerequisite: admission to the professional program. Corequisites: EDRE U414, EDEC U440, U446, U447 and U448.

EDEC U468. Education of Young Children: An Ecological Approach (3) An ecological study with emphasis on home-school relations, parent involvement, and community resources. Multicultural perspectives and needs of exceptional children are addressed. Prerequisite: admission to the professional program. Corequisite: EDEC U469.

EDEC U469. Directed Teaching in Early Childhood Education (12) A supervised clinical experience, consisting of 14 weeks in an early childhood grades (4K-3) placement in a public school. This experience includes an exploration of legal and ethical issues, research through analysis and evaluation of teaching, and completion of a professional portfolio. Prerequisite: approved application for directed teaching. Corequisite: EDEC U468. Pass/fail credit.

ELEMENTARY EDUCATION (EDEL)

EDEL U398. Topics in Elementary Education (1-3) Prerequisites: junior standing and consent of instructor.

EDEL U399. Independent Study (3) Prerequisites: junior standing and consent of instructor.

EDEL U441. Curriculum and Teaching in the Elementary School (3) An introduction to teaching (grades 2-6) including lesson and unit planning, reflective writing, grouping and various aspects of the curriculum. Professional Portfolio and Teacher Work Sample will be introduced. Prerequisite: admission to the professional program. Corequisites: EDFO U483, EDFO U487, EDEL U450, EDEL U455, EDRE U442.

EDEL U446. Teaching Mathematics in the Elementary School (3) Materials, resources, programs and methods for teaching mathematics in grades 2-6. Included are supervised practicum experiences which promote reflective teaching in elementary school settings. Prerequisites: admission to the professional program and MATH U231, MATH U232, MATH U233, EDEL U441, EDFO U483, EDFO U487, EDEL U450, EDEL U455, EDRE U442. Corequisites: EDEL U448, EDEL U447, EDEL U460, EDRE U443, EDRE U444.

EDEL U447. Teaching Social Studies in the Elementary School (3) Materials, resources, programs, and methods for teaching social studies in grades 2-6. Included are supervised practicum experiences which promote reflective teaching in elementary school settings. Prerequisites: admission to the professional program and EDFO U483, EDFO U487, EDEL U441, EDEL U450, EDEL U455,

EDRE U442. Corequisites: EDEL U446, EDEL U448, EDEL U460, EDRE U443, EDRE U444.

EDEL U448. Teaching Science in the Elementary School (3) Materials, resources, programs, and methods for teaching science in grades 2-6. Included are supervised practicum experiences which promote reflective teaching in elementary school settings. Prerequisites: admission to the professional program and EDEL U441, EDFO U483, EDFO U487, EDEL U450, EDEL U455, EDRE U442. Corequisites: EDEL U460, EDEL U446, EDEL U447, EDRE U443, EDRE U444.

EDEL U450. Fine Arts in the Elementary School Curriculum (3) Exploring both content and methods for enriching all subject areas in the elementary classroom through the visual arts, drama, dance/movement, and music. Prerequisites: admission to the professional program. Corequisites: EDEL U441, EDFO U487, EDFO U483, EDEL U455, EDRE U442.

EDEL U455. Clinical I in Elementary Education (2) Supervised clinical experience in elementary settings. Observation and participation in diverse classroom settings is required with a focus on observation of students and teachers, analysis of classroom organization and management, use of technology to enhance learning, and implementation of lessons. Seminars and group discussions included. Four laboratory hours per week. Prerequisites: admission to the professional program. Corequisites: EDEL U441, EDFO U487, EDFO U483, EDEL U450, EDRE U442.

EDEL U460. Clinical II in Elementary Education (2) Supervised clinical experience in elementary settings. Requires assessment of K-12 students with interpretation of assessments, lesson planning based on assessments, implementation of lessons in science, math, and literacy with attention to reading and writing in the content areas. Reflections on teaching and K-12 student learning explored in group discussions and seminars. Four laboratory hours per week required. Prerequisites: admission to the professional program and EDEL U441, EDFO U483, EDFO U487, EDEL U450, EDEL U455, EDRE U442. Corequisites: EDEL U448, EDEL U447, EDEL U446, EDRE U443, EDRE U444 or candidacy in the Learning Disability Program.

EDEL U468. Directed Teaching in the Elementary School (12) A supervised clinical experience consisting of 15 weeks in an elementary school setting (grades 2-6). Full-time teaching responsibilities assumed over time. Prerequisite: approved application for directed teaching. Corequisite: EDEL U469. Pass/fail credit.

EDEL U469. Elementary Education: Issues and Trends (3) Capstone seminar for teacher candidates completing

directed teaching. Major project required. Prerequisite: admission to the professional program; approved application for directed teaching. Corequisite: EDEL U468.

FOUNDATIONS OF EDUCATION (EDFO)

EDFO U200. Teacher Education Colloquium (0) Introduction to the teacher education program policies, assessment system procedures, and professional dispositions. Required before admission to the Art, Early Childhood, Elementary, Middle Level, Learning Disability, Physical Education, and Secondary Education Programs. Pass/fail credit.

EDFO U201. Praxis I Preparation (1) Simulated Praxis I test preparation in the areas of reading, writing and mathematics. Prerequisite: for declared education majors only. Pass/fail credit.

EDFO U210. Foundations of Education (3) The art and science of teaching. A comprehensive examination of the social, historical, and philosophical influences that have shaped educational policies and practices in the USA with special emphasis on legal and ethical aspects of education. Supervised practicum experiences to promote reflective practice in a variety of settings are included.

EDFO U333. Educational Development of the Lifelong Learner (3) Applications of psychology of learning and motivation to patterns of social, emotional, physical and intellectual development, and their relationship to teaching of children, adolescents, and adults.

EDFO U341. Introduction to Exceptional Learners/Special Education (3) Theoretical and practical approaches to the education of the young exceptional child with emphasis on current remedial procedures. Included are alternative administrative arrangements and sources of academic therapy. Supervised field experiences are included.

EDFO U483. Organization and Management of the Diverse Classroom (3) Structuring of physical, social, and instructional environment to maximize learning in a diverse classroom. Candidates develop a comprehensive understanding of both practice and reactive approaches to management with attention to culturally diverse settings. Behaviorist and constructivist approaches, inclusive education and conflict resolution are components of this course. Prerequisites: Admission to the professional program. Corequisites: EDEL U441, EDFO U487, EDEL U455, EDEL U450, EDRE U442; or candidacy in the Learning Disability Program.

EDFO U485. Diversity, Management, and Assessment (3) The dynamic relationships among classroom diversity,

management, instruction, and assessment. Through field experiences and reflection, students develop knowledge and skills in the interaction of these classroom elements. Prerequisite: Admission to the professional program. Corequisites: EDEC U410, U420, U422, and U445 for Early Childhood majors only.

EDFO U487. Student, Teacher, and School Assessment (3) Formal and informal assessment of elementary age students as well as teachers and schools. Attention is given to the appropriate uses of standardized testing as well as teacher made assessments with particular emphasis on the interpretation of test results and their relationship to instructional goals. Consideration is also be given to the issue of accountability and appropriate options for evaluating teachers and schools. Prerequisite: Admission to the professional program. Corequisites: EDEL U441, EDEL U455, EDFO U483, EDEL U450, EDRE U442.

READING EDUCATION (EDRE)

EDRE U384. Children's Literature (3) Exploration of a wide variety of genres of children's literature to become more knowledgeable in the ability to select, read and respond to children's literature. Development of expertise in using children's literature in educational settings and examination of the ways readers interact with texts and each other to make meaning while reading and discussing texts. Prerequisite: ENGL U102.

EDRE U414. Emergent and Early Literacy (3) Theoretical and instructional issues relating to challenges children encounter when learning to read and write. Research on the expected development of such behaviors through stages typically found in the preprimary and primary school years are explored. Procedures, materials, programs, and assessment techniques for developing literacy are investigated. Prerequisite: admission to the professional program. Corequisites: EDEC U440, U446, U447, U448, U449.

EDRE U418. Literacy in the Middle and Secondary School (3) The significance of literacy as it relates to all content areas. The focus is on strategies for making any text material more accessible to the student, and attention is given to matching the learner and the learning. Prerequisites: Admission to the professional program. Corequisite: EDSC U440, EDSC U441 or U442, EDSC U443, EDSC U444; for candidates in physical education, EDPH U312 or EDPH U405.

EDRE U442. Literacy I: Learning to Read and Write (3) Scaffolding reading and writing development for the young child. Teaching candidates review the essentials of language development and focus on the transition from oral language to initial reading and writing. Effective strategies and materials for nurturing literacy develop-

ment of children ages 5-7 are emphasized. Prerequisites: admission to the professional program and EDRE U384. Corequisites: EDEL U441, EDFO U487, EDEL U455, EDEL U450, EDFO U483; or candidacy in the Learning Disability program.

EDRE U443. Literacy II: Reading and Writing to Learn (3) Scaffolding reading and writing development of the elementary and middle grades student. Teaching candidates focus on the transition from initial reading and writing to reading and writing in the content areas. Effective strategies and materials for nurturing literacy development in children ages 8-12 are emphasized. Prerequisites: admission to the professional program, EDEL U441, EDFO U483, EDFO U487, EDEL U450, EDEL U455, EDRE U442. Corequisites: EDEL U448, EDEL U447, EDEL U460, EDEL U446, EDRE U444; or candidacy in the Learning Disability Program and EDRE U442.

EDRE U444. Literacy III: Addressing Reading and Writing Problems (3) Scaffolding reading and writing development for learners experiencing difficulty. Teaching candidates investigate assessments, strategies, and programs appropriate for children with literacy problems including learners from diverse backgrounds and children with special needs. Prerequisites: admission to the professional program and EDEL U441, EDFO U483, EDFO U487, EDEL U450, EDEL U455, EDRE U442. Corequisites: EDEL U448, EDEL U447, EDEL U460, EDEL U446, EDRE U443.

SECONDARY EDUCATION (EDSC)

EDSC U333. Middle Level/Secondary Education Adolescent Development (3) Applications of psychology of learning and motivation to patterns of social, emotional, physical and intellectual development and their relationships to teaching adolescent learners.

EDSC U342. Clinical I in Middle Level/Secondary Education (1) Supervised clinical experience in middle or secondary school setting. Observation and participation in classroom settings is required with a focus on diversity including the physical, social, and educational development of the grades 5-12 learner. Emphasis is on family and community involvement in educational settings. Observation during advisory, lunch, recess, transition times, as well as formal instructional time as appropriate. Corequisite: EDFO U341.

EDSC U398. Topics in Secondary Education (1-3) Prerequisites: junior standing and consent of instructor.

EDSC U399. Independent Study (3) Prerequisites: junior standing and consent of instructor.

EDSC U440. Clinical II in Middle Level/Secondary Education (1) Supervised clinical experience in middle or secondary school setting. Observation and participation in classroom settings is required with a focus on assessment including formal, informal, authentic, high stakes (PASS, end-of-course exams, etc.), and collaborative (team meeting) assessments as appropriate. Seminars and group discussions included. Prerequisites: EDFO U341, EDSC U342, and admission to the professional program. Corequisites: EDSC U441 or 442, EDSC U443, EDSC U444 and EDRE U418.

EDSC U441. Middle Level Curriculum and Methodology (3) An overview of the major concepts, principles, theories and research related to effective curriculum, instruction, and assessment to meet the varying abilities and learning styles of middle school students. Students explore a variety of teaching, learning and assessment strategies along with developmentally responsive materials and resources used to facilitate appropriate learning experiences in middle school settings. The focus is on curriculum needs for middle grades, the transitional function of the middle school, and middle school organization and management. Core topics include unit and lesson planning, evaluation of student performance, multicultural educational issues and teacher effectiveness evaluation. Prerequisites: EDFO U341, EDSC U342, and admission to the professional program. Corequisite: EDSC U440, EDSC U443, EDSC U444, EDRE U418.

EDSC U442. Secondary School Curriculum and Methodology (3) An overview of the major concepts, principles, theories and research related to effective curriculum, instruction, and assessment to meet the varying abilities and learning styles of secondary school students. Students explore a variety of teaching, learning and assessment strategies along with developmentally responsive materials and resources used to facilitate appropriate learning experiences in secondary school settings. Curriculum needs for secondary grades, the newly emerging function of the high school in work/post-secondary education preparation, and secondary school organization and management are addressed. Core topics include unit and lesson planning, evaluation of student performance, multicultural educational issues and teacher effectiveness evaluation. Prerequisites: EDFO U341, EDSC U342 and admission to the professional program. Corequisite: EDSC U440, EDSC U443, EDSC U444, EDRE U418.

EDSC U443. Middle Level/Secondary Educational Assessment (2) An overview of educational assessment including types, characteristics, scoring and appropriate uses of assessments. Understanding measurement theory and assessment related issues. Interpretation and communication of results of assessments. Prerequisites: EDFO U341, EDSC U342 and admission to the professional program. Corequisite: EDSC U440, EDSC U441 or U442, EDSC U444.

EDSC U444. Managing the Middle Level/Secondary Classroom Environment (2) Principles of effective classroom management and strategies to promote positive relationships, cooperation, and purposeful learning. Prerequisites: EDFO U341, EDSC U342 and admission to the professional program. Corequisite: EDSC U440, EDSC U441 or U442, EDSC U443.

EDSC U445. Teaching Middle and Secondary English/Language Arts (3) Methods, materials, resources, issues and trends related to teaching specific subject content in middle and secondary schools, including instructional planning and delivery of instruction. Supervised practicum experiences are designed to promote reflective teaching in middle and secondary school settings. Prerequisites: EDSC U440, EDSC U441 or EDSC U442 and admission to the professional program. Corequisite: EDSC U450.

EDSC U446. Teaching Middle and Secondary Mathematics (3) Methods, materials, resources, issues and trends related to teaching specific subject content in secondary schools, including instructional planning and delivery of instruction. Supervised practicum experiences are designed to promote reflective teaching in middle and secondary school settings. Prerequisites: EDSC U440, EDSC U441 or EDSC U442 and admission to the professional program. Corequisite: EDSC U450.

EDSC U447. Teaching Middle and Secondary Social Studies (3) Methods, materials, resources, issues and trends related to teaching specific subject content in middle and secondary schools, including instructional planning and delivery of instruction. Supervised practicum experiences are designed to promote reflective teaching in middle and secondary school settings. Prerequisites: EDSC U440, EDSC U441 or EDSC U442, and admission to the professional program. Corequisite: EDSC U450.

EDSC U448. Teaching Middle and Secondary Science (3) Methods, materials, resources, issues and trends related to teaching specific subject content in middle and secondary schools, including instructional planning and delivery of instruction. Supervised practicum experiences are designed to promote reflective teaching in middle and secondary school settings. Prerequisites: EDSC U440, EDSC U441 or EDSC U442 and admission to the professional program. Corequisite: EDSC U450.

EDSC U449. Teaching Foreign Language in Secondary Schools (3) Methods, materials, resources, issues and trends related to teaching specific subject content in secondary schools. Also includes instructional planning and delivery of instruction. Supervised practicum experiences designed to promote reflective teaching, in secondary school settings, are included. Prerequisites: EDSC U440, EDSC U441 or EDSC U442 and admission to the professional program. Corequisite: EDSC U450.

EDSC U450. Clinical III in Middle Level/Secondary Education (1) Supervised clinical experience in middle or secondary school setting. Observation and participation in classroom settings is required with a focus on classroom management and conflict resolution. Seminars and group discussions included. Prerequisites: EDSC U440, EDSC U441 or EDSC U442, EDSC U443, EDSC U444, EDRE U418 and admission to the professional program. Corequisites: EDSC U445, U446, U447, U448 and/or U449.

EDSC U473. Directed Teaching in Secondary School English (12) A supervised clinical experience consisting of 14 weeks in secondary school settings. Candidates participate in regular seminars where they (1) analyze problems relating to their grade 9-12 experiences; (2) explore ethical and legal issues related to teaching; (3) consider current issues and trends in K-12 education; and (4) complete their professional portfolios. Prerequisite: approved application for directed teaching. Corequisite: EDSC U485. Pass/fail credit.

EDSC U474. Directed Teaching in Secondary School Foreign Language (12) A supervised clinical experience consisting of 14 weeks in secondary school settings. Candidates participate in regular seminars where they (1) analyze problems relating to their grade 9-12 experiences; (2) explore ethical and legal issues related to teaching; (3) consider current issues and trends in K-12 education; and (4) complete their professional portfolios. Prerequisite: approved application for directed teaching. Corequisite: EDSC U485. Pass/fail credit.

EDSC U475. Directed Teaching in Secondary School History and Social Studies (12) A supervised clinical experience consisting of 14 weeks in secondary school settings. Candidates participate in regular seminars where they (1) analyze problems relating to their grade 9-12 experiences; (2) explore ethical and legal issues related to teaching; (3) consider current issues and trends in K-12 education; and (4) complete their professional portfolios. Prerequisite: approved application for directed teaching. Corequisite: EDSC U485. Pass/fail credit.

EDSC U478. Directed Teaching in Secondary School Mathematics (12) A supervised clinical experience consisting of 14 weeks in secondary school settings. Candidates participate in regular seminars where they (1) analyze problems relating to their grade 9-12 experiences; (2) explore ethical and legal issues related to teaching; (3) consider current issues and trends in K-12 education; and (4) complete their professional portfolios. Prerequisite: approved application for directed teaching. Corequisite: EDSC U485. Pass/fail credit.

EDSC U480. Directed Teaching in the Middle School (12) A supervised clinical experience consisting of 14 weeks in secondary school settings. Candidates partici-

pate in regular seminars where they (1) analyze problems relating to their grade 5-8 experiences; (2) explore ethical and legal issues related to teaching; (3) consider current issues and trends in K-12 education; and (4) complete their professional portfolios. Prerequisite: approved application for directed teaching. Corequisite: EDSC U485. Pass/fail credit.

EDSC U481. Directed Teaching in Secondary School Natural Science (12) A supervised clinical experience consisting of 14 weeks in secondary school settings. Candidates participate in regular seminars where they (1) analyze problems relating to their grade 9-12 experiences; (2) explore ethical and legal issues related to teaching; (3) consider current issues and trends in K-12 education; and (4) complete their professional portfolios. Prerequisite: approved application for directed teaching. Corequisite: EDSC U485. Pass/fail credit.

EDSC U485. Middle Level/Secondary Education: Issues and Trends (3) Capstone experience intended to provide an opportunity for teacher candidates to examine legal and ethical issues as well as current issues and trends in middle level/secondary education. Candidates will reflect upon what was learned. Major project required. Prerequisites: admission to the professional program, approved application for directed teaching. Corequisite: EDSC U473, U474, U475, U478, U480 or U481.

EDUCATION AND TECHNOLOGY (EDTC)

EDTC U420. Information Systems in Education (3) The application of information systems to a variety of educational settings. Topics include policy issues directing the design and implementation of education information systems, particularly data collecting and reporting protocols required for compliance with local, state, and federal mandates. Prerequisites: EDFO U210, EDFO U333, EDFO U341; or consent of instructor.

EDTC U430. Instructional Design and Methods for Information Systems Training (3) Design and delivery of training programs for users of information systems and related technologies. Activities include the production of training materials, management of instructional time and selection of appropriate resources. Methods for the assessment and evaluation of the instructional materials and outcomes are an integral part of this course. Prerequisites: EDFO U210, EDFO U333, EDFO U341; or consent of instructor.

EDTC U497. Information Systems Education Internship (3) Supervised work experience in a district office and other administrative school sites. Emphasis is on the design, implementation, and service of information systems integral to the sponsoring school and district.

The individualized course of study is designed to meet pre-established learning objectives. A "work practice" plan is required and must be approved by the sponsoring organization and the course instructor. Prerequisites: EDFO U210, EDFO U333, EDFO U341; or consent of instructor.

SPECIAL EDUCATION: LEARNING DISABILITY (EDLD)

EDLD U410. Methods of Teaching Students with LD (3) Instructional strategies and practice for teaching learners with LD. Prerequisite: admission to professional program. Corequisites: EDLD U411, EDLD U412.

EDLD U411. Practicum in Learning Disabilities I (1) Application of teaching methods in a special education classroom setting. Prerequisite: admission to professional program. Corequisites: EDLD U410, EDLD U412.

EDLD U412. Characteristics of Students with LD (3) Characteristics of students who have learning disabilities which are manifested in instructional settings. Specific characteristics that are factors in developing comprehensive, longitudinal individualized programs as well as guidelines regarding LD referral, assessment and placement procedures will be presented. Prerequisite: admission to the professional program. Corequisite: EDLD U410, EDLD U411.

EDLD U414. Individualized Curriculum for Students with Disabilities (3) The various etiologies of conditions affecting students with mild/moderate disabilities. Cognitive characteristics of learners with mild/moderate disabilities and the impact on language development, academic performance, social skills, and emotional behavior will be included. Prerequisite: EDLD U412. Corequisites: EDCI U402; EDLD U483; EDLD U440.

EDLD U415. Reading Disorders and Reading Methods (3) Specific methods designed to facilitate the development of reading skills of students with learning disabilities. A practicum experience is required. Prerequisite: Admission to the professional program. Corequisites: EDLD U425 and U445 for LD program majors.

EDLD U425. Practicum in Reading and Language (1) Linguistic and reading needs in the special education classroom setting. Prerequisite: admission to professional program. Corequisites: EDLD U415, EDLD U445.

EDLD U440. Practicum in the Instruction of Students with Disabilities II (1-3) Sequencing, implementing, and evaluating individual learning objectives in a professional setting. Students will select, adapt, and use instructional strategies and materials according to characteristics of the learner. Prerequisite: Admission to the professional

program. Corequisites: EDLD U414, EDLD U483, EDLD U485.

EDLD U445. Language Disorders and Language Arts Methods (2) Specific methods designed to facilitate the development of oral and written language skills among students with learning disabilities. Prerequisite: Admission to the professional program. Corequisite: EDLD U415 and U425.

EDLD U446. Math Disabilities and Math Methods (3) Learning disability specific methods designed to facilitate the development of mathematics concepts and skills. A practicum experience is required. Prerequisites: MATH U231, MATH U232, MATH U233 and admission to the professional program. Corequisites: EDLD U410; EDLD U412.

EDLD U449. Issues and Trends in Exceptionalities (3) The philosophical, historical, and legal foundations of special education that connect with current issues and trends in special education. Prerequisite: admission to professional program. Corequisite: EDLD U470.

EDLD U470. Directed Teaching of Students with Learning Disabilities (12) A supervised clinical experience, consisting of 14 weeks with 50 percent in a special education resource classroom and the remaining 50 percent in an inclusive regular classroom. The experience includes an exploration of ethical issues, research through analysis and evaluation of teaching, and oral presentation of research results. Prerequisite: approved application for directed teaching. Corequisite: EDLD U449. For pass/fail credit.

EDLD U483. Assessment of Students with Disabilities (3) The techniques and practices of diagnostic assessment, including ethical concerns and legal provisions/guidelines. Emphasis is on identifying typical, delayed, and disordered communication and reasoning patterns of individuals with exceptional learning needs. Prerequisite: EDLD U412. Corequisites: EDCI U402; EDLD U414; EDLD U440.

EDLD U485. Behavior Management in Special Education (1) Functional assessments, behavior intervention plans and positive social, emotional, and behavioral support strategies. Prerequisite: Admission to professional program.

ENGLISH LANGUAGE AND LITERATURE (ENGL)

*Note: The completion of ENGL U102 or the equivalent is prerequisite to enrollment in all **higher level** English courses.*

Advanced standing in freshman English classes may be achieved through appropriate scores on Advanced Place-

*ment (AP) tests, passing of appropriate College Level Examination Program (CLEP) tests, or institutional credit by examination. Details may be found in appropriate sections of this catalog or in consultation with the chair of the **Department of Languages, Literature, and Composition.***

Courses are offered in rotation. If you are interested in a particular course, check with the department chair to see when it will be offered.

ENGL U101. Composition I (3) Instruction and practice in academic writing, critical reading and research. Attention is given to planning, drafting, revising, and editing a variety of texts. For students whose placement testing indicates a need for more intensive study, English 101A with a noncredit lab is mandatory to provide supplemental instruction and practice in writing.

ENGL U101H. Honors Composition (3) Thematic studies designed by English faculty specifically for honors students. Its focus may vary depending on the instructor's area of interest. Intensive reading, writing, research, and a service component are included. Prerequisite: Admission to honors program as a first year student or permission of director of honors program. Students who earn an F in ENGL U101H may not re-enroll in ENGL U101H. Students who pass ENGL U101H with a D are not eligible to enroll in ENGL U102H.

ENGL U102. Composition II (3) Continued instruction in composition, building on skills introduced in English 101. Attention is given to writing for specific audiences, reading and analyzing challenging texts, and synthesizing academic sources in writing. Prerequisite: ENGL U101.

ENGL U102H. Honors Composition and Literature (3) Study of works of literature and their social and historical contexts designed by English faculty specifically for honors students. Its focus may vary depending on the instructor's area of interest. Intensive reading, writing, research, and a service component are included. Prerequisites: ENGL U101H with a C or better and admission to honors program or permission of director of honors program. Students who earn an F in ENGL U102H must successfully complete ENGL U102.

ENGL U208. Introduction to Creative Writing (3) Beginning writing workshop. Writers gain experience in genres of poetry, fiction, and non-fiction.

ENGL U245. Business Writing (3) Developing communication skills for the successful professional. Students reflect and apply principles of appropriate content, style and format for memos, letters, reports, resumes, interviews and presentations.

ENGL U250. Selected English Studies Abroad (3-6) A selection of British writing, together with immersion in British culture.

ENGL U252. Understanding English Grammar (3) Intensive review of grammatical principles and mechanics of English with emphasis on exploration and discovery of principles of English grammar usage. ENGL U252/U352 are offered concurrently, and credit cannot be earned for both courses.

ENGL U275. Masterpieces of World Literature (3) Selections from the literature of western and non-western cultures from ancient to modern times.

ENGL U279. Survey of American Literature I (3) American poetry, drama, and prose from colonial times to 1865.

ENGL U280. Survey of American Literature II (3) American poetry, drama, and prose from 1866 to the present.

ENGL U283. Native American Literature (3) Selected readings by Native American writers, including novels, short stories and poetry. ENGL U283/ENGL U383 will be offered concurrently. The reading and writing assignments for students taking ENGL U383 will be longer and the standard for grading will be more demanding. Students may not enroll for both courses.

ENGL U289. Survey of British Literature I (3) British poetry, drama, and prose from the Old English Period to 1797.

ENGL U290. Survey of British Literature II (3) British poetry, drama, and prose from 1798 to the present.

ENGL U291. African American Literature (3) A survey of writings by African American authors. The literary types studied may vary. English 291/391 will be offered concurrently. The reading and writing assignments for students enrolled in ENGL U391 will be longer and the standard for grading will be more demanding. Students may not receive credit for both courses.

ENGL U300. Introduction to the Study of Literature (3) Terminology and methods for the study of literature and criticism, involving the scrutiny of primary and secondary text as well as independent research. Required for English majors. Students who wish to major in English should complete this course before enrolling in English courses above U301.

ENGL U301. Mythical, Classical, and Biblical Backgrounds (3) Central myths and stories of classical and biblical traditions. Myths, characters, narrative patterns, archetypes, and the ways classical texts have shaped imaginative literature are addressed. Required for English majors. Students who wish to major in English should complete this course before enrolling in English courses above U301.

ENGL U308. Intermediate Workshop in Creative Writing (3) Further experience in writing poetry, fiction, and non-fiction. Prerequisite: ENGL U208 or consent of instructor.

ENGL U318. Writing in Digital Environments (3) Using and evaluating a variety of digital tools to research, draft, revise, edit, and publish texts in diverse media. Prerequisites: CSCI U138 or EDCI U120.

ENGL U319. Development of the Novel (3) A critical and historical study of the novel surveying major novels and novelists and illustrating the characteristics of the genre, its historical development, and its reflection of significant literary periods and movements.

ENGL U320. Development of Short Fiction (3) A critical and historical study of short fiction surveying the genre and illustrating its characteristics, historical development, and reflection of significant literary periods.

ENGL U322. Contemporary Literature (3) Comparative works by contemporary world writers.

ENGL U325. Modern German Literature in Translation (3) Masterpieces of German literature. The selection may include texts by T. Mann, Kafka, Brecht, Hesse and Grass. Taught in English. This course may not be used to satisfy a foreign language requirement. Prerequisite: consent of instructor.

ENGL U329. Development of Poetry (3) The development of poetry as a genre and art form. Major periods, movements, and poets from Western and world canons illustrate the richness of the poetic tradition.

ENGL U330. Development of Drama (3) The development of plays and playwrights. Plays from the classical period are explored, and the development of drama through its major movements to the present time is charted.

ENGL U345. Advanced Business Writing (3) Advanced training in developing communication skills for the workplace. Particular emphasis is placed on conducting primary and secondary research, on proposal and report writing, and on writing as a member of a group. Prerequisite: ENGL U245 or consent of instructor.

ENGL U346. Technical Writing (3) The writing of informative text and techniques for presenting it in appropriate formats. Particular emphasis is placed on creating concise texts which use pictures, charts, graphs, and other visuals to convey information to readers in fields such as computer science, engineering, medicine, industrial technology, and other professions.

ENGL U350. Advanced Selected English Studies Abroad (3-6) Role of locale in a selection of British writing, together with immersion in British culture.

ENGL U352. Advanced English Grammar (3) Critical exploration of English grammar with emphasis on higher-order rhetorical application. ENGLU252/U352 are offered concurrently, and credit cannot be earned for both courses. ENGL U352 does not satisfy the "linguistics course U300 or above" requirement for the English major.

ENGL U368. Life Writing Workshop (3) The practice, reading, and criticism of writing autobiographical prose.

ENGL U370. Creative Nonfiction Workshop (3) The practice, reading, and criticism of writing artistic nonfiction prose.

ENGLU371. Grant Writing (3) Writing effective expository text for grants and proposals. The skills of writing for a particular purpose and audience; conforming to stated guidelines; and using clear, concise language are emphasized.

ENGL U383. Native American Literature (3) Selected readings by Native American writers, including novels, short stories and poetry. ENGLU283/ENGLU383 will be offered concurrently. The reading and writing assignments for students taking ENGL U383 will be longer, and the standard for grading will be more demanding. Students may not enroll for both courses.

ENGL U387. Topics in Literature, Culture and Difference (3) Literature of groups that represent the diversity of authors writing in English with a thematic emphasis on cultural identity. With each offering, a different group is selected and may include postcolonial writers, immigrant writers, writers with disabilities, women writers, or writers from regions of the English-speaking world beyond the U.S. and England. The literature selected varies based on the instructor's area of interest and expertise. This course may be taken twice if the topic is different.

ENGL U389. Gay and Lesbian Literature (3) Literature by gay and lesbian authors with a major thematic focus on sexual identity.

ENGL U391. African American Literature (3) A survey of writings by African American writers. The literary types studied may vary. ENGLU291/U391 will be offered concurrently. The reading and writing assignments for students enrolled in ENGL U391 will be longer and the standard for grading will be more demanding. Students may not receive credit for both courses.

ENGL U395. Narrative Poetry, Epic and Heroic (3) Selected readings (in translation) from the epic and heroic poetry of the world.

ENGL U397. Topics in Creative Writing (3) Intensive experience and practice in writing selected types of poetry or prose.

ENGL U398. Topics in Language and Literature (3) Intensive study of selected topics.

ENGLU399. Independent Study (1-3) Directed research and reading project outside the classroom of a complex and extensive nature in keeping with the student's major creative and/or scholarly interests. In addition to writing required for a particular independent study project, a written report on work accomplished is required at the end of the term. Research involves both primary and secondary sources. May be repeated with the consent of the instructor and advisor for total of no more than six hours of undergraduate credit. Prerequisites: Junior or senior standing. GPA 2.0 overall, 2.5 in English courses. A minimum of six hours in English courses numbered U300 and above. Consent of the instructor and advisor. A university contract must be signed with all required signatures.

ENGL U400. A Survey of Literature of Medieval England (3) A representative selection of early literature from the British Isles in English (Old and Middle), Latin, Irish, Welsh, and French during the Middle Ages.

ENGLU401. Chaucer (3) Chaucer's works, with special attention to *The Canterbury Tales*.

ENGL U405. Shakespeare Survey (3) A selection of comedies, histories, tragedies, and romances. Plays from the early and late periods of Shakespeare's career, including not only his most famous works but also his lesser known plays, are surveyed.

ENGL U406. Studies in Shakespeare (3) A critical approach to thematic, topical, or theoretical aspects of certain plays, narrative poems, and sonnets. The specific themes and area of focus may vary.

ENGL U408. Milton (3) *Paradise Lost* and other poetry. Prerequisite: junior standing or permission of instructor.

ENGL U409. English Literature, 1500-1660 (3) Poetry and prose of major Renaissance and Commonwealth writers.

ENGL U412. British Literature, 1616-1798 (3) Poetry, prose and drama of the Restoration and eighteenth century.

ENGL U417. Romanticism (3) The 18th century transition from classicism to romanticism, and the 19th century masters: Wordsworth, Coleridge, Byron, Shelley and Keats.

ENGL U419. Victorian Literature (3) Poetry and prose of major Victorian writers.

ENGL U422. Modern Drama (3) British, American and continental drama beginning with Ibsen and Strindberg.

ENGL U423. British Literature, 1900-1950 (3) Poetry, prose and drama of major writers.

ENGL U424. British Literature, 1950-to the Present (3) Poetry, prose and drama of major writers.

ENGL U425. American Literature, Beginnings to 1830 (3) Colonial and revolutionary American writing with special attention to literary types and to the influence of religion and politics.

ENGL U426. American Literature, 1830-1865 (3) Readings in representative works.

ENGL U427. American Literature, 1865-1910 (3) Readings in representative works.

ENGL U428. American Literature, 1910-1950 (3) Readings in representative works.

ENGL U429. Literature of the Harlem Renaissance (3) Philosophy and literature of the New Negro movement of the 1920s, including works by Hughes, Hurston, Cullen, Fauset and McKay.

ENGL U430. American Literature, 1950-Present (3) Readings in representative works.

ENGL U436. Science Fiction Literature (3) Representative science fiction from the beginnings of the genre to the present.

ENGL U437. Women Writers (3) Representative works written by women.

ENGL U447. Southern Literature (3) An historical and critical survey of selected works of Simms, Lanier, Cable, Harris, Wolfe, Faulkner, O'Connor, Johnson, Wright, McCullers, and other southern writers.

ENGL U451. Introduction to Linguistics (3) An overview of language and linguistics oriented toward language as a reflection of the structure of the human mind and human society. Phonetics, phonology, morphology, syntax and semantics and how they relate to linguistic theory, to issues of language use, to questions of language in the social context, and to issues of language acquisition and language learning are emphasized.

ENGL U453. Development of the English Language (3) History and evolution of the English language reflecting changes in phonetics, semantics, morphology, and syntax, as well as assembly of dictionaries.

ENGL U455. Introduction to Sociolinguistics (3) Introduction to sociolinguistics and the study of language variation in speech communities around the world. Attention is given to the social context of linguistic diversity including dialectology, language and gender, language and ethnicity, pidgins and creoles, new varieties of English, cross-cultural communication, discourse analysis, and applied sociolinguistics.

ENGL U459. Theories of Composition (3) The theory and principles of rhetoric and the application of these principles in the student's own thinking and writing.

ENGL U468. Advanced Creative Writing (3) An intensive course in one genre (poetry, fiction, creative non-fiction, among others) to be announced by the instructor in advance. The genre selected will vary based on the instructor's area of interest and expertise. This course can be taken more than once if the genre is different. Prerequisite: ENGL U308.

ENGL U473. The Teaching of Writing (3) Theory and methods of teaching composition and extensive research and practice in various kinds of writing expected of high school and college students.

ENGL U483. Theory of Literary Criticism (3) Various theories of literary criticism with the aim of establishing standards of judgment. Practice in criticism of literary works.

ENGL U485. Adolescent Literature (3) A survey of literature written for adolescent readers, especially the realistic problem novel. Special attention is placed on defining the characteristics of the field and on developing critical standards for evaluating the works.

ENGL U490. Senior Seminar (3) The integration of knowledge; the exploration of ethical issues; and the application of the skills of research, analysis, and writing about literature at an advanced level. Completion of an academic portfolio, self-directed research and writing, and formal oral presentations are required. The specific focus of the course is designed by faculty and may vary depending on the instructor's area of interest and the students' areas of concentration. Prerequisites: Senior standing; SPCH U201; ENGL U300; and 15 hours of ENGL Ucourses numbered 300 or above, including either U459, U482, or U483.

ENGL U499. Internship (1-3) Supervised professional experience or research outside of the classroom, involving a meaningful project or activity for the employing firm or organization and a scholarly project for the student. For three credit hours, a minimum of 135 hours of supervised work, periodic class meetings and consultation with the instructor are required. A contractual agreement signed

by the employer, the student, the instructor, and the dean of the college is mandatory. A student may repeat ENGL U499 once with a different internship contract description for a total of no more than six hours of undergraduate credit. Prerequisite: Junior or senior standing; a minimum of six hours in major courses numbered U300 and above; GPA 2.0 overall, 2.5 in English courses; and consent of the faculty supervisor and advisor.

ENGLISH AS A SECOND LANGUAGE (ENSL)

ENSL U101. Writing I for Non-native Speakers of English (3) Developing in improving the writing skills of the non-native English speaker. Confidence in writing abilities is built through a systematic approach to the understanding of writing as a process.

ENGINEERING TECHNOLOGY MANAGEMENT (ETMG)

Note: Admission to the ETM program requires a 2.0 grade point average for all college-level coursework attempted prior to program admission. Students majoring in ETM must be within 12 hours of earning an associate degree in an approved engineering technology field to enroll in 300-level ETMG courses. Students majoring in ETM must hold an associate degree in an approved engineering technology field prior to enrollment in any 400-level ETMG courses. ETM courses may be taken by IDS or CIS majors with the consent of the ETM program coordinator.

ETMG U320. Engineering Cost Analysis (4) Engineering economics and financial analysis of prospective alternatives. Lab includes analysis techniques, use of modeling tools, and applications of techniques toward real-world problems. Occasional off-campus laboratory sessions may be required. Three class and three laboratory hours per week. Prerequisite: Admission to ETM program (within 12 hours of Associate degree completion) or consent of Program Coordinator.

ETMG U330. Engineering Work Analysis (4) Techniques for operation analysis, work measurement, and work sampling. Major topics include human factors, work design principles, work environment, economic justification, work measurement and the design process. Predetermined basic motion-time systems and standard data development are introduced. Occasional off-campus laboratory sessions may be required. Three class and three laboratory hours per week. Prerequisite: Admission to ETM program (within 12 hours of Associate degree completion), or consent of Program Coordinator.

ETMG U370. Systems Decision Making (4) Systems analysis mathematical models, environmental factors,

operations research methodologies, dynamic systems and the application of a variety of computer tools. Occasional off-campus laboratory sessions may be required. Three class and three laboratory hours per week. Prerequisites: ETMG U320, ECON U291, MATH U141 or consent of Program Coordinator.

ETMG U410. Engineering Teams Theory and Practice (4) Methods of understanding, planning, and presenting information in oral and written formats while working in an engineering team setting. Occasional off-campus laboratory sessions may be required. Three class and three laboratory hours per week. Prerequisites: ETMG U320, ETMG U330 or consent of Program Coordinator. Pre- or Corequisite: technical communication support course or consent of Program Coordinator.

ETMG U415. Quality Practices (4) Techniques for controlling quality of work processes and assuring delivered or received product quality. Topics include cost of quality, customer/focused quality, quality diagnostic tools, total quality management, quality assurance and quality standards. Occasional off-campus laboratory sessions may be required. Three class and three laboratory hours per week. Prerequisites: ETMG U330 and ECON U291 or consent of Program Coordinator.

ETMG U420. Engineering Project Management (4) Planning, scheduling, control of engineering projects, and applications of project management tools. Occasional off-campus laboratory sessions may be required. Three class and three laboratory hours per week. Prerequisite: ETMG U410 or consent of Program Coordinator.

ETMG U499. Senior Seminar (3) Integration of engineering technology management at an advanced level, the impact of engineers on society, and exploration of ethical issues. Written and oral presentation required. Prerequisites: ETMG U370, ETMG U410, ETMG U415. Pre or corequisite: ETMG U420.

FILM STUDIES (FILM)

FILM U240. Introduction to Film (3) A survey of the basic elements of cinema including mode of production, narrative structure, stylistic design, camera and marketing. Prerequisite: ENGL U102.

FILM U326. Motion Picture and Video Techniques (3) Production techniques used in preparing film and videotape. Prerequisite: ENGL U102.

FILM U341. Literature and Film (3) Adaptations of novels, short stories and/or plays into cinema. Historical and cultural contexts of production and reception of books

and films are emphasized. Prerequisite: ENGL U102.

FILM U342. Film Genre (3) Characteristics of one or more established movie genres such as documentary, film noir, science fiction, new wave cinema, horror, comedy and others. The genre selected may vary based on the instructor's area of interest or expertise. May be repeated for credit if the topic changes. Prerequisite: ENGL U102.

FILM U360. Film Directors (3) Screening and analysis of feature-length films from the works of an individual director or a small group of directors. Analysis involves subject matter, themes, and content as well as technical choices and style, marketing, distribution, and reception of the motion pictures. May be repeated for credit if the topic changes. Prerequisite: ENGL U102.

FILM U398. Special Topics in Film (3) Reading, viewing, and research in a selected film period, style, or other matter of cinema. May be repeated for credit if the topic changes. Prerequisite: ENGL U102.

FILM U399. Independent Study (1-3) An individualized, contracted program of work planned in conjunction with a faculty member. Prerequisite: consent of instructor.

FILM U425. History of Film to 1967 (3) The motion picture industry from the silent era to 1967. American and foreign films and film clips are analyzed to emphasize chronological, technical, structural, economic, thematic and cultural connections. Prerequisite: ENGL U102.

FILM U426. Advanced Video Production (3) Crew assignments during on-air taping and independent group projects involving pre-production, production, and post-production. "Hands on" experience is augmented by demonstrations, lectures, and readings. This course is held in the WRET studio in the USC Upstate Media Building. Prerequisite: ENGL U102 and FILM U326 or previous video or photography experience and permission of Chair, Fine Arts and Communication Studies.

FILM U435. Film History after 1967 (3) American and foreign films and film clips are analyzed to emphasize chronological, technical, structural, economic, thematic, and cultural connections. Prerequisite: ENGL U102.

FILM U475. International Film (3) Representative films from countries other than the United States. Major directors, movements, and periods of Africa, Asia, Australia, Central and South America, and Europe are covered. Prerequisite: ENGL U102.

FILM U480. Interdisciplinary Approaches to Film (3) Cinema explored from the perspective of a specific academic area in addition to film studies. May be repeated

for credit if the topic changes. Prerequisite: ENGL U102.

FILM U481. Cultural Diversity and Difference in Film (3) The representation of race, gender, ethnicity, class, sexuality, age, or other matter of cultural difference in films. Critical and theoretical readings provide framework to interpret cinema in a variety of genres. May be repeated for credit if the topic changes. Prerequisite: ENGL U102.

FILM U482. Film Theory and Criticism (3) Various methodologies of film interpretation described and applied, including early definitive entries to the field and some or all of the following: auteur, genre, star studies, psychoanalysis, feminism, viewer response, semiotics, narratology, new historicism, and cultural studies. Prerequisites: ENGL U102 and FILM U240.

FRENCH (FREN)

Note: Unless otherwise indicated, readings, lectures and discussion in foreign language courses above the elementary level are principally in the language concerned. Incoming students with previous experience in a foreign language must take a placement test.

FREN U 101, 102. Introductory French (3, 3) Fundamentals of the language and culture through speaking, listening, reading and writing. Prerequisite for U102 is FREN U101 or placement through testing.

FREN U201. Intermediate French (3) Review of the basic principles of the language, with emphasis on reading, writing and oral skills. Prerequisite: FREN U102 or placement through testing.

FREN U202. Intermediate French (3) Review of the basic principles of the language, with emphasis on writing, oral skills, and the reading of literary and other authentic texts. Prerequisite: FREN U201 or placement through testing.

FREN U210. French Oral Communication (3) Enhancement of oral expression through group discussions, oral presentations, and vocabulary development. Prerequisite: FREN U202 or placement through testing.

FREN U250. Selected French Studies Abroad (3-6) Development of intermediate level communication skills together with immersion in the culture of a foreign country. Prerequisite: FREN U102 or consent of instructor.

FREN U308. Business French (3) Fundamental elements of the language and exercises in composition centering on business communication skills. Prerequisite: FREN U202 or consent of instructor.

FREN U309. French Grammar and Composition (3) Fundamental elements of the language and exercises in

composition. Prerequisite: FREN U202 or consent of instructor.

FREN U310. French Conversation (3) Advanced vocabulary development and acquisition of fluency through aural and oral activities. Prerequisite: FREN U210 or placement test.

FREN U320. French Civilization (3) Culture and civilization of the French-speaking world, with major emphasis on France. Prerequisite: FREN U202 or consent of instructor.

FREN U330. Survey of French Literature I (3) A selection of medieval and Renaissance French literature through the sixteenth century. Prerequisite: FREN U202 or consent of instructor.

FREN U331. Survey of French Literature II (3) A selection of works from the seventeenth century through the present. Prerequisite: FREN U202 or consent of instructor.

FREN U350. Selected French Studies Abroad (3-6) Development of advanced level communication skills together with immersion in the culture of a foreign country. Prerequisite: FREN U202 or U210 or U250 or consent of instructor.

FREN U398. Topics in French Language or Literature (1-3) Prerequisite: FREN U202 or consent of instructor.

FREN U399. Independent Study or Internship (1-3) Supervised professional experience or research outside the classroom. For three internship credit hours, a student is to work 135 hours with an approved agency; for two credit hours, 90 hours; for one credit hour, 45 hours. For an internship or for an independent study, a contract must be signed by the student and by the instructor of record and other designated faculty and administrators. A student may repeat FREN U399 once with a different internship or independent study contract description for a total of no more than six hours of undergraduate credit. Prerequisites: GPA 2.0 overall, 2.5 in foreign language course and consent of faculty supervisor.

FREN U402. Masterpieces of French Drama (3) Selected works from the beginning of French theatre through the present. Prerequisite: FREN U202 or consent of instructor.

FREN U403. Masterpieces of the French Novel (3) Selected works from the beginning of the French novel through the present. Prerequisite: FREN U202 or consent of instructor.

GEOGRAPHY (GEOG)

GEOG U101. The Upstate (3) Uses the landscape ap-

proach to study the 10-county area of Northwestern South Carolina. Spatial, economic, social, cultural, demographic and natural traits of the contemporary urban, suburban and rural landscapes are examined after an introduction to the landscape approach.

GEOG U103. Introduction to Geography (3) Principles and methods of geographical inquiry.

GEOG U121. Principles of Regional Geography (3) Description of the regional method and an analysis of the region forming processes. Emphasis is on the distinctive features of large areas of the world.

GEOG U201. Introduction to Physical Geography (4) The spatial significance of land forms, water bodies, and soils. Emphasis is placed on both the man-land relationship and the concept of location. Three class and two laboratory hours per week.

GEOG U202. Introduction to Weather and Climate (3) The interrelationship of weather elements and controls and the spatial distribution of climate and vegetation.

GEOG U212. Introduction to Economic Geography (3) Factors in location and production of commodities, commerce and manufacturing.

GEOG U340. Geography of Population, Settlement and Migration (3) (=SOCY U327) Births, deaths, migration and the distribution of human populations, and the analytical methods used in the study of each of these topics.

GEOG U398. Special Topics (3) Geographic dynamics and characteristics at the local, regional or global level. May be taken twice if the topic is different. Prerequisite: Any lower division geography course or consent of instructor.

GEOG U424. Geography of North America (3) Physical and cultural geography of North America with emphasis on the United States.

GEOLOGY (GEOL)

GEOL U101. Physical Geology (4) Methods and procedures of science for interpretation of the earth. The natural processes and their products — the minerals, rocks, fossils, structure and surface forms of the earth are considered. Emphasis is placed on the interplay between hypothesis, experiment, and observable fact which characterize productive physical science. Three class and three laboratory hours per week.

GEOL U102. Historical Geology (4) The practice of geology as an historical science with emphasis on the methods of analysis, nature of the record, and guiding

principles that have allowed geologists to decipher the history of the earth. Three class and three laboratory hours per week.

GEOL U103. Environmental Earth Science (4) Analysis of the basic energy cycles of the earth the interaction of human activity with earth processes to affect the environment. Three class and three laboratory hours per week.

GEOL U104. Natural Disasters (3) Investigates the geologic aspects of several types of natural disasters (earthquakes, volcanoes, floods, etc.) and emphasizes both impacts of natural hazards and ways of mitigating risk from the hazards. Case studies of specific events are used to highlight the social, economic, environmental and human impacts of natural disasters.

GEOL U120. Geology of the Southeast (3) Investigation of the geological processes responsible for the land forms and natural resources of the southeastern United States. Three class hours per week and field trips are required.

GEOL U121. Geology of North America (3) Analysis of the geological history and development of the North American landmass, regions and resources. Comparison of similarities among regions, though formed at widely separated periods in earth history, will be emphasized. Three class hours per week and field trips are required.

GEOL U123L. Geology of National Parks - Field Study (1) Developing field techniques in a national park setting. Principles of geology are reinforced in the classroom component followed by travel to a national park for geological research and the development of appropriate field notes. Prerequisite: GEOL U121 or consent of instructor.

GEOL U131. Earth Resources (3) Mineral, earth and water resources, with particular attention to their occurrence and use, and the interaction between geology and economics as limiting factors on resource development. Three class hours per week and field trips are required.

GEOL U241. Environmental Geology of South Carolina (3) An investigation for the environmental geology of South Carolina focusing on specific case studies including water issues, beach management, waste disposal, energy production and use. Prerequisites: Sophomore standing or consent of the instructor.

GEOL U310. Paleobiology (4) Taxonomy and morphology of fossil organisms. Three class and three laboratory hours per week. Prerequisite: GEOL U102 or BIOL U102 or consent of instructor.

GEOL U399. Independent Study (1-6) Directed research project depending on student interest and needs. Prerequisite: consent of instructor.

GERMAN (GERM)

Note: Unless otherwise indicated, readings, lectures and discussion in foreign language courses above the elementary level are principally in the language concerned. Incoming students with previous experience in a foreign language must take a placement test.

GERM U101, U102. Introductory German (3,3) Fundamentals of the language and culture through speaking, listening, reading and writing. Prerequisite for U102 is GERM U101 or placement through testing.

GERM U201. Intermediate German (3) Review of the basic principles of the language, with emphasis on reading, writing, and oral skills. Prerequisite: GERM U102 or U121 or placement through testing.

GERM U202. Intermediate German (3) Review of the basic principles of the language, with emphasis on writing, oral skills, and the reading of literary and other authentic texts. Prerequisite: GERM U201 or placement through testing.

GERM U210. German Oral Communication (3) Enhancement of oral expression through group discussion, oral presentations, and vocabulary development. Prerequisite: GERM U202 or placement through testing.

GERM U250. Selected German Studies Abroad (3-6) Development of intermediate level communication skills together with immersion in the culture of a foreign country. Prerequisite: GERM U102 or U121 or consent of instructor.

GERM U308. Business German (3) Elements of language centering on written business communication skills. Prerequisite: GERM U202 or consent of instructor.

GERM U310. German Conversation (3) Advanced vocabulary development and acquisition of fluency through aural and oral activities. Prerequisite: GERM U210 or placement through testing.

GERM U325. Modern German Literature in Translation (3) Masterpieces of German literature. The selection may include texts by T. Mann, Kafka, Brecht, Hesse and Grass. Taught in English. This course may not be used to satisfy a foreign language requirement. Prerequisites: ENGL U102 or consent of instructor.

GERM U350. Selected German Studies Abroad (3-6) Development of advanced level communication skills together with immersion in the culture of a foreign country. Prerequisite: GERM U202 or U210 or U250 or consent of instructor.

GERM U398. Topics in German Literature/Language (1-3) Prerequisite: GERM U202 or consent of instructor.

GERM U399. Independent Study or Internship (1-3) Supervised professional experience or research outside the classroom. For three internship credit hours, a student is to work 135 hours with an approved agency; for two credit hours, 90 hours; for one credit hour, 45 hours. For an internship or for an independent study, a contract must be signed by the student and by the instructor of record and other designated faculty and administrators. A student may repeat GERM U399 once with a different internship or independent study contract description for a total of no more than six hours of undergraduate credit. Prerequisites: GPA 2.0 overall, 2.5 in foreign language course, and consent of faculty supervisor.

GOVERNMENT AND INTERNATIONAL STUDIES (see *Political Science*)

HEALTHCARE INFORMATION MANAGEMENT AND SYSTEMS (HIMS)

HIMS U201. Understanding Healthcare Organizations (3) Introduction to origins and evolution of current healthcare delivery systems and organizational structures, healthcare terminology and language structures, common usage, acronyms, and basic uses of information in a variety of healthcare settings. Topics also include introduction to levels of information users and information needs within a variety of healthcare organizations. Prerequisites: CSCI U138, or CSCI U150, or INFO U101, or consent of instructor.

HIMS U250. Department Administration in Healthcare (3) Management, communication, and problem-solving as they relate to human resources, quality assurance, finance, budgeting and reimbursement in a healthcare setting. Prerequisite: Sophomore standing or consent of instructor.

HIMS U301. Healthcare Information Systems (3) Introduction to healthcare information systems to include management and administration information systems, clinical information systems, business information systems, decision support, critical care applications, information systems in education, and emergent system applications. Particular emphasis is placed on automation required for the emerging "paperless" environment and computer-based records. Prerequisite: HIMS U201 or consent of instructor.

HIMS U302. Information Trends in Healthcare Systems (3) Data, knowledge, and information structures, terminological control, index language functions, regulatory determinants of data collected/stored (ex. JCAHO/HIPPA, etc.), including study of language development in

healthcare systems evolution. Prerequisite: HIMS U301 or consent of instructor.

HIMS U412. Ethics and Risk Management in Healthcare Information Systems (3) Selected ethical issues, confidentiality, preservation and conservation of sensitive data, data maintenance and integrity preservation. Prerequisites: PHIL U211 or PHIL U310 or PHIL U311 or PHIL U321; and HIMS U302; or consent of instructor.

HIMS U413. Network Applications for Healthcare Information Systems (3) Network configurations and functions including the latest developments and applications in electronic health records (EHR) and the implementation of the EHR in the healthcare industry. Prerequisite: HIMS U302 or consent of instructor.

HIMS U417. Healthcare Information Security (3) Infrastructure assessment, business protection practices, and compliance management based on the International Information Systems Security Certification Consortium's 10-domain model for healthcare information technology systems. Prerequisite: CSCI U315 or consent of instructor.

HIMS U450. Healthcare Database Systems and Information Retrieval (3) Database formats and structures, query techniques, document classification, managing large data collections, statistical applications in data management. Emphasis is placed on the discovery of methods to capture data as an important institutional resource through efficient management of databases and data repositories, and on the importance of data collections that provide accurate outcome assessment. Prerequisite: INFO U421 or consent of instructor.

HIMS U496. Special Topics (3) Study reflective of current issues/topics related to the field of healthcare information management. Topics might include (but are not limited to) emergent technology in healthcare settings such as user interface design, expert system evolution, virtual environments, soft computing/fuzzy logic applications, artificial intelligence. Topics chosen for study in a given semester will be determined by the state of the science at the time of the offering. Prerequisite: Completion of 12 hours HIMS courses.

HIMS U498. Practicum in Healthcare Information Management (3) Supervised professional practice involving information management in a healthcare organization. Prerequisite: Senior standing in the accredited health information management application area.

HEALTH EDUCATION (EDHL)

EDHL U170. First Aid (1) Instruction leading to basic certification in standard first aid and cardiopulmonary resuscitation. Discussion of HIV/AIDS and back injury

prevention is also included.

EDHL U221. Lifelong Health and Wellness (3) Wellness and fitness trends in America. Self-assessment of health status concepts, human sexuality, health promotion strategies (physical fitness, stress management, nutrition, weight control) and health maintenance of major life style diseases (Cardiovascular disease, cancer, diabetes mellitus, HIV, substance abuse).

EDHL U331. Health and Physical Education for the Elementary School Child (3) Methods and materials for teaching health and physical education in the elementary school including integration and correlation of materials with other subjects at primary and intermediate grade levels.

EDHL U334. The School Health Program (3) Methods of teaching health with special emphasis on the relationship of health to physical education. Health service, healthful school living, and method and materials of teaching health are included. Prerequisites: EDHL U221 and BIOL U232.

HISTORY (HIST)

HIST U101. Introduction to World History I (3) World history to 1500. Using a global approach, emphasis is placed on major political, social, economic, and cultural trends.

HIST U102. Introduction to World History II (3) 1500 to the present. Using a global approach, emphasis is placed on major political, social, economic, and cultural trends.

HIST U105. History of the United States to 1877 (3) The indigenous peoples, the era of discovery, and the nation from Independence to the end of Reconstruction, emphasizing major political, economic, social, and intellectual developments.

HIST U106. History of the United States from 1865 (3) The rise of modern America after the Civil War, emphasizing the political, social, economic, and intellectual trends that contributed to the development of contemporary society.

HIST U198. Current History (1) Major events in the news with emphasis on their historical context and likely long-range significance. May be taken up to three times for credit.

Note: the prerequisite for all upper division history courses is any 100-level history course or the consent of the instructor.

HIST U300. Introduction to Historical Studies (3) Methods of historical inquiry. Particular attention is given

to primary and secondary sources, document analysis, citation methods, research paper skills, and historical writing.

HIST U301. Early North America (3) The history of North America from its earliest inhabitants, the exploration and colonization of North America through the end of the Seven Years' War. The subject matter includes Native American societies, background on the Europeans and Africans who would migrate to the colonies, the collision of cultures, family life and labor, colonial administration, and the development of international rivalries in North America.

HIST U302. History of the Revolutionary Era (1763-1789) (3) Era from the end of the Seven Years' War through the ratification of the United States Constitution including the social, political, economic, cultural, and geographic development of the new nation out of the struggle for independence.

HIST U303. History of the Early American Republic (1789-1820) (3) The ratification of the United States Constitution through the first three decades of American independence, including the social, political, economic, cultural, and geographic development of the new nation through this period.

HIST U304. The Age of Jackson (1820-1848) (3) The Jacksonian Era from 1820 through 1848, including the social, political, economic, cultural, and geographic development of the new nation under this period.

HIST U305. Sectionalism and Civil War (1848-1877) (3) The Civil War Era from 1848 through 1877 including the social, political, economic, cultural, and geographic development of the nation during this period, with a concentration on the rise of sectionalism in the country, the military and social conflicts during war, and the tribulations of the Reconstruction era.

HIST U306. Gilded Age and Progressive Era America (1877-1917) (3) The Gilded Age and the Progressive Era between 1877 and 1917 including the social, political, economic, cultural, and geographic development of the nation during this period.

HIST U307. The United States and the World at War, 1914-1945 (3) The era from 1914 to 1945, focusing on the social, political, economic, cultural, and geographic development of the nation during this period including the American involvement in the two World Wars, the Roaring Twenties, and the Great Depression.

HIST U308. U.S. History Since 1945 (3) The history of the United States during the period from 1945 to the present. Subjects included will be the social, political, economic, cultural, and geographic development of the nation during this period.

HIST U310. African-American History to 1865 (3) The African background, origins of slavery, the rise of the free black community, and African Americans as actors in the political, economic, social, and cultural history of the United States to the end of the Civil War.

HIST U311. African-American History since 1860 (3) The African American role in the Civil War. Emancipation, Reconstruction, and the development of the black community since 1860. Major topics include African Americans' struggle for autonomy and equal rights in the political and economic arenas, the impact of race in American society, and the intellectual and cultural traditions of African Americans.

HIST U312. American Military History (3) United States involvement in armed conflicts from the colonial period to the present. Subjects covered include the evolution of warfare, the place of the military in society, and the development of professionalism in American forces.

HIST U313. The Vietnam War (3) The causes, major events, and impact of the Vietnam War viewed in a cross-cultural context.

HIST U318. Native American History (3) Pre-Columbian times to the present in North America. Emphasis is placed on economic, political, military and social changes in native cultures over time in response to European and then American encroachment.

HIST U320. The South to 1865 (3) The southern United States from the colonial era to the end of the Civil War, emphasizing the development of regionally distinct political, social, economic, and cultural characteristics and institutions.

HIST U321. The South since 1865 (3) The southern United States from the era of Reconstruction to the present. Topics include the tension between an increasingly national focus in economics and politics and the desire to maintain local social control. The question of the persistence of a southern identity is central.

HIST U322. History of South Carolina, 1670 to the Present (3) The origins and development of South Carolina from colonial times to the present with emphasis on the unique role the state has played in the nation's history.

HIST U323. Our Past: Upstate History (3) Local history, focusing on Greenville, Spartanburg, and Cherokee Counties. Public/applied history techniques and projects are included.

HIST U330. Early Mediterranean Empires (3) Peoples in trade, politics, culture, and society in the Mediterranean region through the rise of the Byzantine Empire. Significant

attention is given to the Egyptian, Persian, and Byzantine Empires with the main emphasis on Greece and Rome.

HIST U332. Renaissance and Reformation in Europe (3) Economic, political, social and cultural developments in Italy in the fourteenth and fifteenth centuries; their spread north and collision with the new ideas released in the Protestant revolt of the sixteenth century. Significant attention is given to the religious wars of the late 1500s and early 1600s.

HIST U333. Absolutism and Enlightenment in Europe (3) Social, economic, intellectual, cultural and political transformation of Europe from Louis XIV to the French Revolution. Significant attention is given to Absolutism, Louis XIV, Peter the Great, Frederick the Great, Maria Theresa, Catherine the Great and the new ideas of the Enlightenment.

HIST U335. Twentieth Century Eastern Europe (3) Eastern Europe from Austro-Hungarian, Russian and German domination to present. Significant attention is paid to nationalism, national self-determination, World Wars I and II, economic and political struggles, communist domination, and independence.

HIST U336. Nineteenth Century Europe (3) Europe from the French Revolution to the end of the nineteenth century. Significant attention is paid to the French Revolution, the Napoleonic Era, industrial development and its consequences, new ideologies, imperialism, and the rise of Italy and Germany.

HIST U337. Age of the World Wars (3) World War I, the Inter-war years, and World War II. Particular attention is given to the causes and events of World War I, the Paris Peace Conference of 1919, the struggles of the Inter-war period, the rise of Adolf Hitler, and the causes and events of World War II.

HIST U338. Europe's Cold War (3) The Cold War experience in Europe from 1945 to the early 1990s, from a political, social, cultural, economic and military perspective. Significant attention is given to European recovery, the creation of the Soviet Bloc as well as its demise, and European unity.

HIST U340. Germany since 1870 (3) Cultural, political, intellectual and social impact of unification, World War I, the Weimar Republic, the Third Reich, East and West Germany, and reunification.

HIST U341. History of Modern Russia (3) Political, economic, social and cultural developments from the mid-nineteenth century through the present.

HIST U347. Medieval Britain 1066-1399 (3) Political,

social, economic, religious, and intellectual development in Britain during the High Middle Ages, from the Norman Conquest to the fall of Richard II.

HIST U348. Early Modern Britain 1399-1750 (3) British social, political, religious, cultural, and economic development in the early modern period. Topics will include Henry VIII, Bloody Mary, Elizabeth, the English Civil War and the Glorious Revolution.

HIST U349. Modern Britain 1750-Present (3) British social, political, religious, cultural and economic development in the modern period, including the rise of industrialization, imperialism, and the two World Wars.

HIST U350. Genocides in Europe (3) Causes, comparisons, and consequences of ethnic cleansing and genocide from the late nineteenth century through the present. Significant attention is paid to the Jewish Holocaust in World War II.

HIST U351. Women in Early Modern Europe and America (3) Changing notions of the female body and women's roles as lovers, housewives, mothers, philosophers, consumers, workers, saints and potential citizens in pre-industrial, commercial and early industrial Europe.

HIST U352. Women in Modern Europe and America (3) Industrialization, changing images of the female body, radical and reform movements, war, economic depression, citizenship, race, professionalization, women's unwaged as well as wage labor, and effect of occupational choice upon women's social roles.

HIST U353. History of Science (3) The development of natural philosophy from the ancient Greeks through the Scientific Revolution and Enlightenment to the rise of modern science.

HIST U354. Birth of Europe 300-1000 (3) European political, social, economic, religious, and intellectual development from the establishment of Christianity as an officially sanctioned religion to the dawn of the feudal age. Topics will include the Germanic kingdoms, Charlemagne's Empire and the Viking invasions.

HIST U355. Medieval Civilization 1000-1400 (3) European political, social, economic, religious, and intellectual development during the High Middle Ages. Topics will include feudalism, the Crusades, and the Black Death.

HIST U360. Africa to 1800 (3) Traditional culture, early civilizations, rise of Islam, Sudanic empires, and the slave trade era.

HIST U361. Africa since 1800 (3) Commercial and religious revolutions of the 19th century, partition, colonial

rule, post-independence, and South Africa.

HIST U370. History of China (3) The cultural, economic, social, and political development of China with emphasis on the transformation of traditional Chinese society from 1644 to the present.

HIST U371. History of Japan (3) The cultural, economic, social, and political development of Japan with emphasis on the transformation of traditional Japanese society from 1600 to the present.

HIST U372. History of India (3) The cultural, economic, social, and political development of India with emphasis on Hindu and Islamic influences, the rise of nationalism during the period of British rule, and post-independence India.

HIST U373. Pre-modern East Asia (3) Political, cultural, and economic development in China, Japan, and Korea before 1600 with an emphasis on interactions of different regions in East Asia.

HIST U375. Revolutions in Modern China (3) Political history of China between the late 19th century and the early 21st century, including the emergence of Chinese nationalism, the spread of Marxism, the rise of the Chinese Communist Party, democratic movements in mainland China and Taiwan, and political and economic reforms.

HIST U380. Latin American to 1830 (3) Indigenous cultures, the Spanish and Portuguese presence in the Caribbean, South America and Mesoamerica through independence.

HIST U381. Latin American since 1810 (3) Independence, the national period, the struggles for political stability and democracy and against militarism and authoritarianism, economic development, issues of ethnic identity and culture.

HIST U390. Foundations of a Global Society to 1800 (3) Early interaction among major world areas; the beginning of European maritime expansion in the fifteenth century; the establishment of colonial and commercial empires; the slave trade era; and the political, economic, and cultural consequences of these developments to the early nineteenth century.

HIST U391. Emergence of a Global Society since 1800 (3) Developments since the late eighteenth century, including the impact of population increase and migration, the imperialism of the later nineteenth century and the nature and consequences of the colonial era that followed, the transition to independence, continuing technological innovation and the interconnectedness of the contemporary world.

HIST U399. Independent Study (1-6)

HIST U491. Topics in History (3) Reading and research on selected historical subjects. Prerequisite: Any lower division history class or consent of instructor.

HIST U492. Topics in United States History (3) Reading and research on selected historical subjects related to the history of the United States. Prerequisite: U.S. history at the 300-level or consent of instructor.

HIST U493. Topics in European History (3) Reading and research on selected European subjects.

HIST U494. Topics in Non-Western History (3) Reading and research on selected Non-Western subjects.

HIST U495. Topics in African-American History (3) Reading and research on selected historical subjects related to the African-American experience. Prerequisite: HIST U310, HIST U311, or consent of instructor.

HIST U496. Topics in Women's History (3) Reading and research on selected subjects in women's history. Prerequisite: Any lower division history class or consent of instructor.

HIST U500. Senior Seminar (3) Exploration, at an advanced level, of issues, topics and dilemmas in both the subject matter and the profession of history with emphasis on research and oral presentation of research findings. The specific topics covered in the course vary. Prerequisite: 12 hours of HIST at the U300-level or above with a minimum grade of C, or consent of instructor.

HONORS COURSES (HONS)

HONS U101. The Life of the Mind (3) A facilitated seminar taught by multiple faculty members with an interdisciplinary theme centered around the life of the mind, including questions about the nature of education, knowledge, and the self. Introduction is provided to various academic fields through interdisciplinary projects and problem solving and significant interactions with honors faculty and other USC Upstate departments and resources. Prerequisite: Acceptance to the Honors Program or consent of the Honors Program director.

HONS U120. Honors Fine Arts and Humanities (3) An interdisciplinary approach to introductory fine arts and humanities studies that fulfill general education requirements. A critical introduction to these fields is achieved through the exploration of an interdisciplinary theme. Themes may include art therapy, ekphrasis, or the history of religious art. Prerequisite: Acceptance to the Honors Program or consent of the Honors Program director.

HONS U121. Honors Natural Science and Mathematics (3) An interdisciplinary approach to introductory natural science and mathematics studies that fulfill general education requirements. A critical introduction to these fields is achieved through the exploration of an interdisciplinary theme. Themes may include the history of physics, introductory bioinformatics or the statistics of gender. Prerequisite: Acceptance to the Honors Program or consent of the Honors Program director.

HONS U122. Honors Social and Behavioral Sciences (3) An interdisciplinary approach to introductory social and behavioral science courses that fulfill general education requirements. A critical introduction to these fields is achieved through the exploration of an interdisciplinary theme. Themes may include the psychology of elections, sociology of relationships, or work and economics. Prerequisite: Acceptance to the Honors Program or consent of the Honors Program director.

HONS U199. General Education Tutorial (3) An introductory study of a general education discipline that addresses applications of the field of study and/or interdisciplinary approaches to the field. Examples include introductory legal philosophy, biomedical ethics, or behavioral economics. Prerequisite: Acceptance to the Honors Program or consent of the Honors Program director.

HONS U201. Self and Society (3) An interdisciplinary seminar centered on community, leadership, and societal problem solving through projects and community-based problem-solving. Scholarly reflection on service projects and significant interactions with community leaders. Prerequisite: Acceptance to the Honors Program or consent of the Honors Program director.

HONS U250. Honors Travel (1-3) Visits to and study of international or US sites of historic, cultural, and/or literary significance. Content and itinerary will vary depending on the instructor's area of interest. Prerequisite: Acceptance to the Honors Program or consent of the Honors Program director.

HONS U301. The Ethical Factor (3) A seminar with an interdisciplinary theme centered on ethics and ethical problem solving. Examples include America's evolving moral landscape and civil rights, or science, ethics and religion. Interdisciplinary research projects and problem solving, scholarly reflection through written and oral communication, and interactions with guest speakers from the University and the wider community foster leadership and advanced academic skills. Prerequisite: Acceptance to the Honors Program or consent of the Honors Program director.

HONS U350. Honors Travel (3) Visits to and study of international or U.S. sites of historic, cultural, scientific, and/or literary significance. The focus and work product

for the course vary depending on the instructor's area of interest. Prerequisite: Admission to Honors Program or overall GPA of 3.25 at USC Upstate or accredited institution with permission of the Director of the Honors Program.

HONS U398. Honors Special Topics (3) Interdisciplinary approaches to enduring issues or current topics. Technology-based and/or presentation-based projects may be required. Prerequisite: Acceptance to the Honors Program or consent of the Honors Program director.

HONS U399. Honors Tutorial (3-4). Directed research and reading of a complex and comprehensive nature in keeping with individual interests and goals and culminating in a final project and/or written report. Research may involve both primary and secondary sources in one or more disciplines. Prerequisite: Acceptance to the Honors Program or consent of the Honors Program director. May be repeated with the consent of the Director of the Honors Program for a total of no more than eight hours of undergraduate Honors credit.

HONS U400. Honors Internship (1-4) Directed hands-on practicum experience in keeping with individual interests and goals. Honors interns complete additional research and reading and prepare a written report at the end of the term. Prerequisite: Acceptance to the Honors Program or consent of the Honors Program director. May be repeated with the consent of the Director of the Honors Program for a total of no more than eight hours of undergraduate Honors credit. A University contract must be completed with all required signatures.

HONS U401. The Process of Progress (3) A seminar with an interdisciplinary theme centered on the nature of research and research-based problem solving. Tracing the process of design and discovery of a documented well-known research project leads to the application of that model to individualized honors projects. Example project models might include the human genome project and its implications for the limits of humanity, or the TED movement. Prerequisite: Acceptance to the Honors Program or consent of the Honors Program director and 9 Honors credits.

INFORMATION MANAGEMENT AND SYSTEMS (INFO)

INFO U101. Survey of Information Technology (3) Use of information technology to collect, analyze, and transform data into knowledge using desktop software and commonly available Internet-based resources and the evaluation of information sources for accuracy, suitability, safety, security, societal and ethical issues.

INFO U201. Concepts of Information Management and

Course Descriptions

Systems (3) Theoretical foundations of organization of information; cognitive structures and processing of data, information, knowledge, and understanding information uses and users. The integrated and interdisciplinary nature of information science and computer science is introduced and developed through case studies and examples from concentration disciplines: business, education, communication, and healthcare settings. Prerequisite: CSCI U138.

INFO U211. Microcomputer Organization (3) Introduction to the major features of operating system software, the primary functions of CPU's, bus architectures, secondary storage devices, peripheral devices, hardware and software configuration. The goal is the assembly and disassembly of microcomputer systems and installation of operating systems, network operating systems, and applications software. Prerequisite: CSCI U138 or consent of instructor.

INFO U303. Organizational Informatics and IT Platforms (3) Needs, uses and consequences of information in organizational contexts, information technology platforms, architectures and infrastructures, functional areas and processes, information-based products and services, the use of and redefining role of information technology, sociotechnical structures, and the rise and transformation of information-based industries. Prerequisite: INFO U201 or consent of instructor.

INFO U305. Social Informatics (3) Key social research and perspectives on the use of information and communication technologies, information ethics, relevant legal frameworks, popular and controversial uses of technology, digital divides, and multicultural issues of information management. Prerequisites: INFO U303 or equivalent or consent of instructor.

INFO U307. Systematic Innovation (3) Methodologies, tools, skills, and knowledgebase supporting a repeatable, structured, and disciplined approach to innovative problem solving, brainstorming, and alternative thinking included, but not limited to: useful/harmful feature analysis, problem formulator diagramming, selection and application of innovation operators, and the innovation situation questionnaire. Prerequisites: 24 credit hours or consent of instructor.

INFO U345. Technical Presentation and Communication (3) Communication technologies in the workplace such as Power Point, Lotus, Freelance and HTML. Prerequisites: CSCI U138 and SPCH U201.

INFO U346. Communication and New Technology (3) Understanding the components of various technologies and their importance in information management and dissemination within and outside the organization. Prerequisite: CSCI U138.

INFO U347. Web page Construction (3) Design of user-layer Web pages using HTML, Java script, Flash, and Dreamweaver, featuring graphic preparation, layout and effective presentation of information. Prerequisites: INFO U305 or INFO U303 or consent of instructor.

INFO U399. Independent Study in Informatics (1-6) Directed and self-guided research into topics of interest in the field of informatics. May be repeated for a maximum of 6 credit hours. Prerequisite: Consent of instructor.

INFO U415. E-Commerce and the Internet (3) Coordination and cultural challenges, value creation opportunities, and information management issues associated with various forms of electronic commerce including electronic data interchange, the World Wide Web, and the Internet in today's global economy. Prerequisite: CSCI U315 or consent of instructor.

INFO U421. Data Warehousing and Decision Support Systems Technology (3) Data warehousing, online analytical processing, and decision support systems. Topics include design and architectural issues, cost effectiveness, management concerns, data integrity, deployment, and maintenance issues. Prerequisite: CSCI U325 or consent of instructor.

INFO U422. Knowledge-Based Systems (3) Knowledge representation, intelligent decision systems, principals of rule-based systems, action rules, interestingness measures, distributed query answering. Select study of actual systems and applications in specific domains such as: medicine, business, communications, and education. Prerequisite: INFO U421 or consent of instructor.

INFO U423. Human-Machine Interaction (3) Concepts of interaction and how people acquire, store and use data including interface analysis and creation, human factors in perception, pattern recognition, speech recognition, attention, memory and expectation. Prerequisite: Senior standing or consent of instructor.

INFO U440. Business Process Re-engineering & Workflow (3) Information technology and communication requirements of, and cultural or social issues pertaining to, the flow of work through distributed information management processes in business and other organizations. Students in the Healthcare Informatics application area focus on applications in the healthcare setting. Prerequisites: INFO U415 and senior standing or consent of instructor.

INFO U441. IT Project Management (3) Breakdown, estimation, leadership of a diverse team, and the use of tools to ensure the completion of deliverables within budget and on schedule. Students in the Healthcare Informatics application area focus on applications in the healthcare

setting. Prerequisites: INFO U415 and senior standing or consent of instructor.

INFO U450. Executive IT Management (3) Issues and challenges facing IT executives including IT alignment and governance, consensus, executive leadership, oversight, return-on-investment analysis, project management, and risk management. Students in the Healthcare Informatics application area focus on applications in the healthcare setting. Prerequisite: Senior standing and INFO U345, or consent of instructor.

INFO U496. Special Topics in Informatics (1-6) Current trends, events, software, hardware, and issues in informatics, information technology, and information management. May be repeated for a maximum of six credit hours. Prerequisites: Senior standing and consent of instructor.

INFO U498. Experiential Learning in Information Management and Systems (3) The application of learning in a professional setting. To complement and strengthen the Information Management and Systems academic program, students will complete a planned program of observation, study, and work in selected organizations with information management and systems offices. Student will have an opportunity to apply and articulate what they have learned in the classroom. Prerequisites: IMS major, senior standing and approval of instructor. Pass/fail credit.

INFO U499. Senior Seminar in Information Management and Systems (3) Integration of knowledge in information management and systems. Students will study and evaluate current innovations in technology and current applications of these systems. Case studies involving information systems technology will be used. Students will research and present new trends in technology. Students will experience an intensive and practice exercise in scholarship production. Class discussion will foster effective and creative implementation of research strategies, writing abilities, documentation procedures, portfolio development, and presentational skills. Students in the Healthcare Informatics application area focus on applications in the healthcare setting. Prerequisite: Senior standing or consent of instructor.

INTERDISCIPLINARY STUDIES (IDST)

IDST U300. Introduction to Interdisciplinary Studies (3) Approaches to understanding, analyzing, and synthesizing information from varied perspectives. Emphasis is on researching, writing, and crafting sound arguments from multi-disciplinary approaches. Prerequisite: ENGL U102.

IDST U398. Interdisciplinary Studies Internship (1-3)

Supervised work experience in a community agency or business based on an individualized, contracted program planned in conjunction with a faculty member and approved by the student's advisor. For three internship credit hours, a student is to work 135 hours with an approved agency; for two credit hours, 90 work hours; for one credit, 45 hours. A student may repeat UNIV U398 once with a different internship contract description for a total of no more than six hours of undergraduate credit. Prerequisites: junior standing, and approved internship contract.

IDST U490. Senior Seminar in Interdisciplinary Studies (3)

Reading and research on selected topics designed to explore issues of broad interdisciplinary interest. Designed to integrate knowledge at an advanced level, explore ethical issues, and gain experience in research and oral presentation. Seminar topics vary. Prerequisites: senior standing and permission of IDS advisor.

INTERNATIONAL STUDIES (INTL)

INTL U399. International Studies Abroad (1-15) Course placeholder for students studying abroad. Will be replaced by actual credit when transcript received.

JOURNALISM (JOUR)

JOUR U201. Survey of Mass Communications (3) Survey of the principles, philosophies, policies and practices of the mass media with an overview of the print media, the broadcast media, and advertising/public relations. Prerequisite: ENGL U102.

JOUR U302. Journalism and History (3) Analyzes the role of mass media from the colonization of America to the present. The interrelationships between journalism and American social, cultural, economic and political issues are explored. Prerequisite: ENGL U102.

JOUR U303. Law and Ethics of the Mass Media (3) South Carolina and federal law relating to mass communications, the Internet, and the ethics of the journalistic profession. Prerequisite: JOUR U201 or consent of instructor.

JOUR U304. Writing for the Media (3) Writing for print, broadcasting, public relations, the Internet, both news and non-news. Using word processors, students prepare exercise and copy both in class and out of class on set deadlines. Prerequisite: ENGL U101.

JOUR U305. Mass Communication Theory (3) The role of communication models such as the social learning

theory, agenda setting, and cultivation theory in explaining the processes and effects of mass communications. Prerequisite: ENGL U102.

JOUR U310. Mass Media and Society (3) How mass media function and influence today's world. The interaction of mass media and contemporary culture is explored through an analysis of media examples. Prerequisite: ENGL U102.

JOUR U325. Speech for Radio and Television (3) Principles, standards and skills for broadcast speech in varied formats. Focus areas include pronunciation, enunciation, rate of delivery, pitch, inflection, and use of appropriate terminology in scripted and ad lib delivery. Prerequisite: SPCH U201.

JOUR U328. Fundamentals of Public Relations (3) Inquiry into the role, influence and practice of planned and responsive communication between organizations and their multiple publics. Through exploring the foundations and evolving application of public relations, publicity and informational materials for varied purposes and audiences are produced using traditional and emerging industry tools. Prerequisite: ENGL U102.

JOUR U330. TV Studio Production (3) A combination of lectures and labs in a professional television setting. Fundamental skills in basic lighting, use of the audio board, directing, camera work, scene blocking, switching, and production sequences are practiced from the planning stage through post-production. Students produce short examples of contemporary television genres. Prerequisite: ENGL U102.

JOUR U333. News and Feature Writing (3) Practices in journalism and news media. The processes and skills needed to prepare news and feature copy against set deadlines are explored and applied. Prerequisite: JOUR U201.

JOUR U334. Writing for Broadcasting (3) Writing commercials, news stories, interview programs, documentaries for radio, television and film. Using word processors, students prepare copy in class against deadlines. Prerequisite: JOUR U201.

JOUR U350. Social and Emerging Media (3) Practical and theoretical overview of the impact of Web 2.0 technologies on newswriting and reporting. Topics include: creating and integrating new media tools such as blogs; wikis; social bookmarking; mapping and satellite tools; podcasts; screencasts; and social networks such as Facebook, YouTube, and Twitter into their multimedia news reports. Prerequisite: ENGL U102 or consent of instructor.

JOUR U398. Special Topics in Journalism (3) A specific area or media field is explored relating to the professional

responsibilities of the journalism student looking toward the career marketplace. Prerequisite: JOUR U201.

JOUR U424. History of American Media (3) The American system of media, with emphasis on the chronological, structural, economic, social, and cultural development of print, broadcasting, cable and new media. Prerequisite: ENGL U102.

JOUR U428. Public Relations Campaigns (3) Exploration and application of the fundamental skills and processes needed for successful campaigns serving professional, corporate and nonprofit clients. All aspects of public relations campaigns including publicity materials, teamwork, developing timelines and budgets, and presenting proposals to clients are applied, culminating in a completed client-specific public relations plan. Prerequisite: ENGL U102.

JOUR U430. Media Management (3) Procedures, problems, and concerns relating to the administration and management of media agencies -- print, broadcast, advertising, and public relations. Prerequisite: ENGL U102.

JOUR U450. Women in the Media (3) Roles women play in media production, and the portrayal of women in mass media genres including advertising, cartoons, daytime and prime-time dramas, films, video games, sports programs, political campaigns, and news. Emphasis is placed on the effects of media portrayals on women and solutions for countering negative media constructions of women. Prerequisite: ENGL U102 or consent of instructor.

JOUR U480. Diversity in the Media (3) Media's depiction of groups marginalized based on race, and/or class. The interactions and relationships among professional terminology, cultural implications, message construction, media analysis and community perceptions are explored. Prerequisite: ENGL U102 or consent of instructor.

LOGIC (LOGC)

LOGC U205. Introduction to Logic and Rhetoric (3) (= University 301) The identification and evaluation of reasoning as it occurs in natural language uses. The techniques of careful reading and clear writing are demonstrated through the production of critical essays. Two lecture and one laboratory hour per week. Prerequisite: ENGL U102.

LOGC U207. Deductive Logic (3) An examination of deductive arguments through the use of Aristotelian logic and propositional logic.

LOGC U307. Advanced Symbolic Logic (3) Advanced study of formal logic using propositional logic and predicate calculus. Prerequisite: LOGC U207 or consent of instructor.

MATHEMATICS (MATH)

Note: The appropriate entry level in mathematics is determined by the student's intended major and a mathematics placement examination given to all entering freshmen. Placement testing is also required for transfer students who have not completed their general education mathematics requirements.

Majors in the natural or computer sciences or mathematics who have completed three years of college preparatory mathematics and have demonstrated competence on the mathematics placement examination; should enroll in Mathematics U121, U126 or U127 as appropriate. Students who need both college algebra and trigonometry have the option of taking Mathematics U121 (with a grade of B or better) or U126, and Mathematics U127. Those who have demonstrated competence in college algebra can take Mathematics U127 to meet the calculus prerequisite. Upon successful completion of one of the precalculus options, students should enroll in Mathematics U141. Those who have completed four years of college preparatory mathematics, including trigonometry, and have demonstrated competence on the mathematics placement examination, should enroll in Mathematics U141.

Students not majoring in the natural or computer sciences, who have successfully completed high school Algebra I and II, and have demonstrated competence on the mathematics placement examination, should enroll as follows: business administration majors in the Mathematics U121, U122 sequence; elementary, early childhood, and special education majors in Mathematics U121, and U231; other majors in a mathematics course determined by their advisors.

MATH U102. Elementary Statistics (3) The fundamentals of modern statistical methods, descriptive and inferential statistics, probability and sampling; primarily for students in fields other than mathematics who need a working knowledge of statistics. Prerequisites: high school Algebra I and II, or equivalent.

MATH U120. College Mathematics (3) Linear equations and inequalities, exponential equations, mathematics of finance, fundamental set theory, fundamentals of probability and statistics. This course may not be used to satisfy any prerequisite requirement for higher-numbered mathematics courses. Prerequisites: appropriate score on placement test and high school Algebra I and II.

MATH U121. College Algebra (3) Equations and inequalities, graphing, polynomial, rational, exponential, logarithmic, and other functions; matrices and systems of equations. Only one of MATH U121 and U126 may be used to satisfy a mathematics requirement for general education or major credit. Prerequisites: appropriate score on placement test and high school Algebra I and II. For students who need a more intensive study, an expanded version of college algebra (MATH U121A) is available. MATH U121A is open to students who have an appropriate

score on the placement test, have completed MATH U120 with the mandatory lab, or if the student, in consultation with his or her advisor, determines that extra instruction is needed in order to succeed in MATH U121.

MATH U122. Calculus for Management and Social Sciences (3) Derivatives and integrals of elementary algebraic, exponential and logarithmic functions; maxima, minima, rate of change, area under a curve, and volume. Problems and examples are drawn from a variety of areas which include economics, psychology, biology, geography, and geology. Prerequisite: MATH U121, U126 or eligibility for exemption from MATH U121.

MATH U126. Precalculus I (3) Subsets of the real number line; polynomial, rational, absolute value, exponential and logarithmic relations and functions. Only one of MATH U121 and 126 may be used to satisfy a mathematics requirement for general education or major credit. Prerequisites: appropriate score on placement test and three years of college preparatory mathematics; or a C or better in Mathematics 099 and three years of college preparatory mathematics.

MATH U127. Precalculus II (3) Trigonometric functions, trigonometric identities, solution of equations and triangles, inverse trigonometric functions, vectors, polar coordinates; analytic geometry. Prerequisite: appropriate score on placement exam or consent of instructor. Prerequisite or Corequisite: MATH U126.

MATH U141. Calculus I (4) Limits, continuity, the derivative, differentiation with applications in the natural sciences and engineering, antiderivatives, basic integrals with applications. Prerequisites: appropriate score on placement test and four years of college preparatory mathematics including trigonometry; or C or better in both MATH U126 and U127; or consent of instructor.

MATH U142. Calculus II (4) Applications of integration, techniques of integration, differential equations, parametric equations, and finite sequences and series. Prerequisite: MATH U141 or its equivalent.

MATH U174. Elements of Discrete Mathematics (3) Topics in basic logic; proof techniques; sets, relations, and functions; counting; and elementary number theory. Prerequisite: high school precalculus, or MATH U126 or equivalent, or consent of the instructor.

MATH U202. Elementary Statistics II (3) An expansion of topics taught in the first semester of elementary statistics such as hypothesis testing; inferences; correlation and regression. Additional topics to be covered include: multinomial experiments and contingency tables; analysis of variance; statistical process control; and individual projects. Prerequisites: MATH U102, or ECON U291,

or SOCY U201, or PSYC U225.

MATH U231. Basic Concepts of Elementary Mathematics I (3) The meaning of number, fundamental operations of arithmetic, the structure of the real number system and its subsystems, elementary number theory. Open only to students in early childhood, elementary, middle grades, or special education. Prerequisite: Grade of C or better in MATH U121 or higher, not including statistics, or consent of the instructor.

MATH U232. Basic Concepts of Elementary Mathematics II (3) A continuation of the development of the real number system and its subsystems, basic concepts of probability, and elementary data analysis. Open only to students in early childhood, elementary, middle grades, or special education. Prerequisite: Grade of C or better in MATH U231 or consent of the instructor.

MATH U233. Geometry and Measurement (3) A study of properties and relationships of shape, size, and symmetry in two and three dimensions; explorations of concepts of motion in two and three dimensions through transformations. Open only to students in early childhood, elementary, middle grades, or special education. Prerequisite: MATH U231 or higher with a grade of C or better, or consent of the instructor.

MATH U241. Calculus III (4) Vectors and geometry of space, vector functions, partial derivatives, multiple integration, vector calculus and second order differential equations. Prerequisite: C or better in MATH U142 or its equivalent; or consent of instructor.

MATH U245. Elementary Differential Equations (3) Ordinary differential equations of first order, higher order linear equations, Laplace transform methods, series methods; numerical solutions of differential equations; applications to the physical sciences and engineering. Prerequisite: MATH U241.

MATH U255. MATLAB Programming (3) Programming language and techniques designed specifically for programs that rely on the application of mathematics for solution. Topics include variables, assignment statements, expressions, vectors and matrices, MATLAB scripts, input and output, selection statements, flow control, program organization, M-files, optimizing M-files, string manipulations, data structures, advanced functions, plotting, symbolic math toolboxes, variable precision arithmetic, and tricks and tips in MATLAB programming. Prerequisites: MATH U141 or consent of instructor.

MATH U315. Statistical Methods I (3) Review of descriptive statistics, testing statistical hypothesis, introduction to correlation, regression and linear regression models,

model building, variable selection and model diagnostics. Prerequisite: MATH U102 or U141, or ECON U291, or SOCY U201, or PSYC U225, or consent of the instructor.

MATH U320. Mathematical Modeling (3) Graphs of functions as models, modeling using proportionality and geometric similarity, model fitting and models requiring optimization, experimental modeling, modeling using the derivative and interactive dynamic systems. Prerequisite: MATH U141.

MATH U340. Mathematical Structures and Proof (3) Topics in set theory, logic, elementary application of logic, methods of mathematical proofs, equivalence relations and partial orderings, functions and mappings, and number systems. Prerequisite: MATH U142.

MATH U344. Linear Algebra I (3) Matrices, systems of linear equations, vectors, Euclidean vector spaces, linear transformations, eigenvalues and eigenvectors. Prerequisites: MATH U142 or consent of instructor.

MATH U345. Applied Partial Differential Equations (3) Basic linear Partial Differential Equations (PDEs) of hyperbolic, parabolic, and elliptic types used in mathematical modelling of physical, chemical, biological and other phenomena, systems, technical devices and financial markets. Selected topics such as the boundary value and initial value problems are covered. Prerequisite: C or better in MATH U245 or consent of instructor.

MATH U346. Modern Algebra I (3) Group theory and introduction to rings. Topics include abelian groups, cyclic groups, permutations, group homomorphisms and isomorphisms, Cayley's theorem, normal subgroups, quotient groups and Lagrange's theorem. Prerequisite: MATH U340 or consent of instructor.

MATH U354. Real Analysis I (3) Ordered field properties of the real number system; completeness; theory of limits of sequences, series and functions; continuity (including uniform continuity); introduction to theory of the derivative. Prerequisites: MATH U340; or Corequisite: MATH U340 and consent of instructor.

MATH U374. Theory of Discrete Mathematics (3) Topics selected from theoretical Boolean algebra, algebraic structures, theory of computing, advanced set theory, and recursive functions. Prerequisites: MATH U142, MATH U174, or consent of the instructor.

MATH U399. Independent Study (1-9)

MATH U444. Elements of Optimization (3) The methods of the numerical solutions of optimization problems arising in operational research, logistics, economics, etc.

Emphasis is on the simplex and Karmarkar's polynomial-time method. Prerequisites: C or better in both MATH U241 and MATH U344 or consent of instructor.

MATH U501. History of Mathematics (3) A survey of the major developments and procedures of mathematics, from its origins to the modern era, relating development with the diverse cultures and the aspects of mathematics they contributed. Prerequisites: MATH U142 or consent of instructor.

MATH U531. Foundations of Geometry (3) Geometry as a logical system based upon postulates and undefined terms; fundamental concepts and relations of Euclidean geometry developed rigorously on the basis of a set of postulates; some topics from non-Euclidean geometry. Prerequisite: MATH U340 or consent of the instructor.

MATH U544. Linear Algebra II (3) Vector spaces, and subspaces; bases and dimension; change of basis; linear transformations and their matrices; diagonalization; canonical forms; bilinear forms; eigenspaces. Prerequisite: MATH U340, MATH U344.

MATH U546. Modern Algebra II (3) Advanced topics in groups, rings and fields. Topics include p-groups, polynomial rings, ideals, integral domains, extension fields and isomorphism theorems for groups and rings. Prerequisite: MATH U346.

MATH U552. Complex Variables (3) Complex numbers and functions, complex integration, Taylor and Laurent series, residues, and conformal mapping. Prerequisite: MATH U340 or consent of the instructor.

MATH U554. Real Analysis II (3) Further development of the theory of differential and integral calculus including properties of the derivative and integral, Fundamental Theorem of Calculus, sequences and series of functions. Prerequisite: MATH U354.

MATH U560. Numerical Analysis I (3) (=CSCI U560) Difference calculus; direct and iterative techniques for matrix inversion; eigenvalue problems; numerical solutions of initial value problems in ordinary differential equations; stability; error analysis; laboratory applications. Prerequisites: MATH U245, U344 and programming competency.

MATH U561. Numerical Analysis II (3) The finite-difference and finite element methods for the numerical solution of basic linear Partial Differential Equations (PDEs) arising in mathematical modelling of physical, chemical, biological and other phenomena, systems, technical devices and financial markets. Prerequisites: C or better in both MATH U345 and MATH U560; or consent of instructor.

MATH U579. Introduction to Industrial Mathematics (3) Basic applications of PDEs, numerical methods for PDEs and scientific computing to applied problems arising in the natural sciences, industry, and financial engineering. Emphasis is on the formulation and solution of problems of heat transfer and diffusion equations, Maxwell's equations and differential equations governing the financial derivatives. Prerequisite: C or better in both MATH U345 and MATH U561 or consent of instructor.

MATH U598. Topics in Mathematics (3) Intensive study in an area of pure or applied mathematics such as mathematical modeling. Topics are selected to meet current faculty and student interest. Prerequisite: MATH U241 and consent of the instructor.

MATH U599. Seminar in Mathematics (3) Recent developments in pure and applied mathematics at an advanced level; ethical issues; and experience in research and oral presentation. Prerequisite: Senior Standing. Prerequisites or corequisites: MATH U344, MATH U346, and either MATH U315 or MATH U512.

MILITARY SCIENCE (MILS)

***Note:** Military Science offers a Basic Program and Advanced Program. There are no prerequisites for the courses offered under the Basic Program. Courses may be taken in any order; but it is recommended that the 100-level courses be taken prior to the 200-level courses. Prerequisites for entering the Advanced Program include one of the following: satisfactory completion of six semester hours in the Basic Program, 90 contact hours in ROTC activities, substitute military experience (Basic Training/Advanced Individual Training), or three years of JROTC. Successful completion of the Advanced Program, together with a college degree, qualifies the graduate for either a Reserve or Regular Army Commission as a Second Lieutenant in the U.S. Army. Advanced Program students are required to participate in the weekly Military Science Lab. Students in the basic program are encouraged to participate in the department's adventure training.*

Basic Program

MILS U101. Introduction to Leadership I (1) Competencies critical for effective leadership. Cadets learn life skills, such as critical thinking, goal setting, time management, physical fitness, and stress management related to leadership, officership, and the army profession. Focus is on developing basic knowledge and comprehension of army leadership dimensions while gaining an understanding of the Reserve Officer Training Course (ROTC), its purpose for the army, and its advantages for the cadet. Open to all freshmen.

MILS U102. Introduction to Leadership II (1) Leadership fundamental such as setting direction, problem solv-

ing, listening, presenting briefs, providing feedback, and using effective writing skills. Cadets explore dimensions of leadership values, attributes, skills, and actions in the context of practical, hands-on, and interactive exercises. Open to all freshmen.

MILS U141. Leadership Lab (1) Application of skills acquired in assigned military science classes. Leadership labs meet for three hours per week at varying off-campus locations to maximize training opportunities. The labs are sequential and progressive in nature, and correspond with every level of the military science classes. Lab participation is mandatory for all contracted cadets regardless of academic classification. Open to all students enrolled in military science courses. Course may be repeated for additional credit.

MILS U201. Foundations of Leadership I (2) Dimensions of creative and innovative tactical leadership strategies and styles. Cadets study team dynamics and historical leadership theories that form the basis of the army leadership framework and learn techniques of personal motivation and team building in the context of planning, executing and assessing team exercises. Cadets are encouraged to participate in leadership labs to demonstrate comprehension of class materials. Focus is on continuous development of the knowledge of leadership values and attributes through an understanding of rank, structure, and duties, and basic aspects of tactics and land navigation. Open to all sophomores.

MILS U202. Foundations of Leadership II (2) Team-building and leadership theory, personal communications skills, team goal-setting and time-management skills. Cadets will explore the conduct of tactical operations at small unit levels. As potential army officers, cadets will be challenged to study, practice, and execute army leadership and values as they become more familiar with the army. Participation in leadership labs is highly encouraged for all enrolled cadets. Open to all sophomores.

Advanced Program

MILS U301. Tactical Leadership (3) The study, practice, and evaluation of adaptive leadership skills as they are presented with the demands of preparing for the ROTC Leader Development Assessment Course (LDAC). Challenging scenarios related to small unit tactical operations are used to develop self-awareness and critical thinking skills. Cadets analyze and evaluate their own leadership attributes, skills, and actions. Primary attention is given to preparation for LDAC and development of leadership abilities. Open to contracted juniors and seniors only. Prerequisites: MILS U202 or consent of Professor of Military Science.

MILS U302. Applied Leadership (3) Intense situational leadership challenges to build cadet awareness and skills

in leading tactical operations. Cadets review aspects of combat, stability, and support operations. Cadets also conduct military briefings and develop proficiency in garrison operation orders. The focus is on exploring, evaluating and developing skills in decision making, persuading, and motivating team members in the contemporary operating environment. Open to contracted junior and graduate students only. Prerequisites: MILS U301 or consent of Professor of Military Science.

MILS U401. Developmental Leadership (3) Planning, executing, and assessing complex operations. Cadets function as staff members and provide leadership performance feedback to subordinates. Cadets are given situational opportunities to assess risk, make ethical decisions, and provide mentorship to subordinate cadets. Participants are responsible for analyzing and evaluating the leadership values, attributes, skills, and actions of military science cadets while simultaneously evaluating their own leadership skills. Attention is given to preparation for future military assignments. Open to contracted seniors and graduate students only. Prerequisites: MILS U302 or consent of Professor of Military Science.

MILS U402. Adaptive Leadership II (3) The dynamics of leading in complex ongoing military operations in the current operating environment. Cadets examine differences in customs and courtesies, military law, principles of war, and rules of engagement in the face of international terrorism. They also explore aspects of interacting with governmental organizations, civilians on the battlefield, and host nation support. Significant emphasis is on preparing cadets for their first units of assignment. Open to contracted senior and graduate students only. Prerequisites: MILS U401 or consent of Professor of Military Science.

MUSIC EDUCATION (EDMU)

EDMU U354. Music for Elementary and Middle Schools (3) The integration of music into the elementary and middle school curriculum. An holistic approach to music as personal expression, aesthetic perception, critical analysis, and music as it influences cultural heritage.

MUSIC (MUSC)

MUSC U100. Recital Attendance (0) Appreciation of music styles through attendance at USC Upstate and community music performances. Required of music majors for six semesters. Pass/fail credit.

MUSC U110. Introduction to Music (3) Comprehensive appreciation of music through intelligent listening to representative masterpieces of the various periods of musical

composition. No previous study of music is required. Three class hours per week.

MUSC U111A. Applied Music in Bass (1) Individual study in bass performance requiring weekly 30-minute lessons for twelve weeks and an additional four hours per week of practice. Prerequisite: Consent of instructor. Auditions may be required. PLEASE NOTE: *Students who withdraw from this course will not receive a tuition or fee reimbursement or refund.*

MUSC U111B. Applied Music in Trombone (1) Individual study in trombone performance requiring weekly 30-minute lessons for twelve weeks and an additional four hours per week of practice. Prerequisite: Consent of instructor. Auditions may be required. PLEASE NOTE: *Students who withdraw from this course will not receive a tuition or fee reimbursement or refund.*

MUSC U111D. Applied Music in Percussion (1) Individual study in percussion performance requiring weekly 30-minute lessons for twelve weeks and an additional four hours per week of practice. Prerequisite: Consent of instructor. Auditions may be required. PLEASE NOTE: *Students who withdraw from this course will not receive a tuition or fee reimbursement or refund.*

MUSC U111G. Applied Music in Guitar (1) Individual study in guitar performance requiring weekly 30-minute lessons for twelve weeks and an additional four hours per week of practice. Prerequisite: Performance ability commensurate with music to be performed and consent of instructor. Auditions may be required. May be repeated for additional credit. PLEASE NOTE: *Students who withdraw from this course will not receive a tuition or fee reimbursement or refund.*

MUSC U111P. Applied Music in Piano (1) Individual study in piano performance requiring weekly 30-minute lessons for twelve weeks and an additional four hours per week of practice. Prerequisite: Consent of instructor. Auditions may be required. PLEASE NOTE: *Students who withdraw from this course will not receive a tuition or fee reimbursement or refund.*

MUSC U111S. Applied Music in Saxophone (1) Individual study in saxophone performance requiring weekly 30-minute lessons for twelve weeks and an additional four hours per week of practice. Prerequisite: Consent of instructor. Auditions may be required. PLEASE NOTE: *Students who withdraw from this course will not receive a tuition or fee reimbursement or refund.*

MUSC U111T. Applied Music in Trumpet (1) Individual study in trumpet performance requiring weekly 30-minute lessons for twelve weeks and an additional four hours per

week of practice. Prerequisite: Consent of instructor. Auditions may be required. PLEASE NOTE: *Students who withdraw from this course will not receive a tuition or fee reimbursement or refund.*

MUSC U11V. Applied Music in Voice (1) Individual study in voice performance requiring weekly 30-minute lessons for twelve weeks and an additional four hours per week of practice. Prerequisite: Consent of instructor. Auditions may be required. PLEASE NOTE: *Students who withdraw from this course will not receive a tuition or fee reimbursement or refund.*

MUSC U115. Commercial Music and Aural Skills (3) Elements of music including intervals, triads, seventh chords, melodic development, and related ear training, with an emphasis on composing and analysis of both classical and contemporary music styles.

MUSC U116. Commercial Music Theory and Aural Skills II (3) Basic chromatic harmony, part writing, modulations, and related ear training with an emphasis on composition and analysis of both classical and contemporary music styles. Prerequisite: MUSC U115 or consent of instructor.

MUSC U126. Vocal Jazz Ensemble (1) Performance and instruction in the vocal jazz idiom. Rehearsals, clinics, and performances are designed to increase the students knowledge of the jazz language. Prerequisite: Basic music reading skills and performance ability commensurate with music to be performed. Auditions may be required. May be repeated for additional credit.

MUSC U127. Jazz Band (1) Rehearsal and performance of jazz literature. Prerequisite: Basic music reading skills and performance ability commensurate with music to be performed. Auditions may be required. May be repeated for additional credit.

MUSC U128. Gospel Music Workshop (1) The directed performance of traditional and contemporary gospel music. No audition or prior experience is necessary.

MUSC U129. University Singers (1) Performing chorus for men and women. No previous experience required.

MUSC U131. Guitar Ensemble (1) Rehearsal and performance of guitar ensemble literature including jazz, pop, and classical genres. Students gain experience through rehearsals, clinics, and live performance. Prerequisite: Basic music reading skills and performance ability commensurate with music to be performed. Students must provide their own instruments. Auditions may be required. May be repeated for additional credit.

MUSC U132. Chamber Choir (1) Rehearsal and perfor-

mance of vocal and choral literature that is representative of various musical eras. Students will rehearse and study various techniques required for performance of choral literature not normally associated with larger choirs. Prerequisite: Performance ability commensurate with music to be performed and consent of instructor. Auditions may be required.

MUSC U133. Pep Band (1) Rehearsal and performance of pep band literature including traditional and contemporary genres. Students gain experience through rehearsals, clinics, and live performance. Prerequisite: Basic music reading skills and performance ability commensurate with music to be performed. Auditions may be required.

MUSC U140. History of Rock Music (3) Representative artists, cultural significance, and classic recordings in the development of rock music.

MUSC U145. Group Guitar (2) Guitar instruction in a group setting focusing on traditional and contemporary music styles. Students provide their own instrument. May be repeated for additional credit.

MUSC U155, U156, U255, U256. Group Piano (2,2,2,2) Piano technique including sight-reading, rhythmic studies, and piano literature from simple to advanced. The individual needs of students are considered in the levels of materials studied and performed.

MUSC U165. Singing Master Class (2) Vocal technique practicum including tone production, breath management, technical studies and song literature in diverse styles. Lectures explore diverse topics related to commercial singing. Performance work culminates in a public presentation of talent. Recommended for commercial music majors, minors and non-majors.

MUSC U166. Singing Master Class (2) Vocal technique practicum including tone production, breath management, technical studies and song literature in diverse styles. Lectures explore diverse topics related to commercial singing. Performance work culminates in a public presentation of talent. Recommended for commercial music majors, minors and non-majors.

MUSC U215. Commercial Music Theory and Aural Skills III (3) Countermelody, borrowed chords, modes, enharmonic modulations, and related ear training with an emphasis on composition and analysis of both classical and contemporary music styles. Prerequisite: MUSC U116 or consent of instructor.

MUSC U216. Commercial Music Theory and Aural Skills IV (3) Harmonic principles of jazz, blues, binary and ternary forms, twentieth-century composition techniques, and related ear training, with an emphasis on composition

and analysis of both classical and contemporary music styles. Prerequisite: MUSC U215 or consent of instructor.

MUSC U265. Singing Master Class (2) Vocal technique practicum including tone production, breath management, technical studies and song literature in diverse styles. Lectures explore diverse topics related to commercial singing. Performance work culminates in a public presentation of talent. Recommended for commercial music majors, minors and non-majors.

MUSC U266. Singing Master Class (2) Vocal technique practicum including tone production, breath management, technical studies and song literature in diverse styles. Lectures explore diverse topics related to commercial singing. Performance work culminates in a public presentation of talent. Recommended for commercial music majors, minors and non-majors.

MUSC U301. Music History I (3) A review of music from the Middle Ages through the classic era of the early nineteenth century focusing on composers and musical genres. Prerequisite: ENGL U102 or consent of instructor.

MUSC U302. Music History II (3) A review of music from the early nineteenth century through contemporary music focusing on composers and musical genres. Prerequisite: ENGL U102 or consent of instructor.

MUSC U310. Jazz History (3) Origin, development, and styles of jazz music and its innovators. Cultivation of critical listening skills and study of classic and contemporary jazz recordings. Prerequisite: ENGL U102.

MUSC U311A. Applied Music in Bass (1) Individual study in bass performance requiring weekly 30-minute lessons for twelve weeks and an additional four hours per week of practice. Prerequisite: Intermediate to advanced performance ability and consent of instructor. Auditions may be required. May be repeated for additional credit. PLEASE NOTE: *Students who withdraw from this course will not receive a tuition or fee reimbursement or refund.*

MUSC U311B. Applied Music in Trombone (1) Individual study in trombone performance requiring weekly 30-minute lessons for 12 weeks and additional four hours per week of practice. Prerequisite: Intermediate to advanced performance ability and consent of instructor. Auditions may be required. May be repeated for additional credit. PLEASE NOTE: *Students who withdraw from this course will not receive a tuition or fee reimbursement or refund.*

MUSC U311D. Applied Music in Percussion (1) Individual study in percussion performance requiring weekly 30-minute lessons for twelve weeks and an additional four hours per week of practice. Prerequisite: Intermediate to

advanced performance ability and consent of instructor. Auditions may be required. May be repeated for additional credit. PLEASE NOTE: *Students who withdraw from this course will not receive a tuition or fee reimbursement or refund.*

MUSC U311G. Applied Music in Guitar (1) Individual study in guitar performance requiring weekly 30-minute lessons for twelve weeks and an additional four hours per week of practice. Prerequisite: Intermediate to advanced performance ability and consent of instructor. Auditions may be required. May be repeated for additional credit. PLEASE NOTE: *Students who withdraw from this course will not receive a tuition or fee reimbursement or refund.*

MUSC U311I. Applied Music in Improvisation (1) Individual study in music improvisation requiring weekly 30-minute lessons for 12 weeks and an additional four hours per week of practice. An additional fee is assessed. Prerequisite: Intermediate to advanced performance ability and consent of instructor. Auditions may be required. May be repeated for additional credit. PLEASE NOTE: *Students who withdraw from this course will not receive a tuition or fee reimbursement or refund.*

MUSC U311P. Applied Music in Piano (1) Individual study in piano performance requiring weekly 30-minute lessons for twelve weeks and an additional four hours per week of practice. Prerequisite: Intermediate to advanced performance ability and consent of instructor. Auditions may be required. May be repeated for additional credit. PLEASE NOTE: *Students who withdraw from this course will not receive a tuition or fee reimbursement or refund.*

MUSC U311S. Applied Music in Saxophone (1) Individual study in saxophone performance requiring weekly 30-minute lessons for twelve weeks and an additional four hours per week of practice. Prerequisite: Intermediate to advanced performance ability and consent of instructor. Auditions may be required. May be repeated for additional credit. PLEASE NOTE: *Students who withdraw from this course will not receive a tuition or fee reimbursement or refund.*

MUSC U311T. Applied Music in Trumpet (1) Individual study in trumpet performance requiring weekly 30-minute lessons for twelve weeks and an additional four hours per week of practice. Prerequisite: Intermediate to advanced performance ability and consent of instructor. Auditions may be required. May be repeated for additional credit. PLEASE NOTE: *Students who withdraw from this course will not receive a tuition or fee reimbursement or refund.*

MUSC U311V. Applied Music in Voice (1) Individual study in voice performance requiring weekly 30-minute lessons for twelve weeks and an additional four hours per week of practice. Prerequisite: Intermediate to advanced performance ability and consent of instructor. Auditions

may be required. May be repeated for additional credit. PLEASE NOTE: *Students who withdraw from this course will not receive a tuition or fee reimbursement or refund.*

MUSC U325. Jazz Theory (3) Technical aspects of jazz improvisation including harmonic substitutions, chord/scale relationships, analysis of harmonic progressions and solos, forms, piano voicings, and ear training. Prerequisite: Basic music reading ability.

MUSC U326. Vocal Jazz Ensemble (1) Performance and instruction in the vocal jazz idiom. Rehearsals, clinics, and performances are designed to increase the student's knowledge of the jazz language. Prerequisite: Intermediate music reading skills and performance ability commensurate with music to be performed. Auditions may be required.

MUSC U327. Jazz Band (1) Rehearsal and performance of jazz literature. Prerequisite: Intermediate music reading, performance ability commensurate with music to be performed, and consent of instructor. Auditions may be required. May be repeated for additional credit.

MUSC U328. Gospel Music Workshop (1) The directed performance of traditional and contemporary gospel music. Prerequisite: Previous gospel choir experience and performance ability commensurate with music to be performed. Auditions may be required.

MUSC U329. University Singers (1) Performing chorus for men and women.

MUSC U331. Guitar Ensemble (1) Rehearsal and performance of guitar ensemble literature including jazz, pop, and classical genres. Prerequisite: Intermediate music reading skills and performance ability commensurate with music to be performed. Auditions may be required.

MUSC U332. Chamber Choir (1) Small performing vocal group for men and women. Prerequisite: Intermediate music reading and performance ability commensurate with music to be performed. Auditions required.

MUSC U333. Pep Band (1) Rehearsal and performance of pep band literature, including traditional and contemporary genres. Students gain experience through rehearsals, clinics, and live performance. Prerequisite: Intermediate music reading skills and performance ability commensurate with music to be performed. Auditions may be required.

MUSC U345. Jazz Improvisation I (3) Principles of improvisation including idiomatic chord progressions, blues scales, patterns, melodic development, and tune styles. This is primarily a lecture class; however, students may be required to demonstrate improvisational skills on their instrument. Prerequisite: MUSC U325 or consent of instructor.

MUSC U346. Jazz Improvisation II (3) Advanced principles of improvisation including idiomatic chord progressions, formal analysis of tunes, modal scales, melodic development, and aural skills. This is primarily a lecture class; however, students may be required to demonstrate improvisational skills on their instrument. Prerequisite: MUSC U345 or consent of instructor.

MUSC U361. Music Business (3) Publishing, licensing, booking, copyrights, contracts, artist management, promotional materials, royalties, and press kits applicable to the music industry. Prerequisite: ENGL U102 or consent of instructor.

MUSC U362. Music Technology (3) The use of industry-standard software to record, compose, and self-publish music. Prerequisite: Basic music reading skills, CSCI U138, INFO U150, or consent of instructor.

MUSC U364. Music Entrepreneurship (3) Career choices and portfolio development in the commercial music industry. Prerequisite: Junior or senior class standing or permission of instructor.

MUSC U365. Songwriting (3) Methods of creating melodies, lyrics, and chord progressions with an emphasis on contemporary commercial music styles. Ability to read music not required. Prerequisite: Junior standing or consent of instructor.

MUSC U366. Composition (3) Developing thematic material with contemporary and traditional techniques. Ability to read music required. Prerequisite: MUSC U216 or MUSC U325 or consent of instructor.

MUSC U367. Arranging for Ensembles (3) Methods and resources needed to create music for jazz bands, vocal groups, and other ensembles with an emphasis on both traditional and contemporary music styles. Prerequisite: MUSC U216 or MUSC U325 or consent of instructor.

MUSC U398. Selected Topics in Music (3) Reading and research on selected topics in music. Prerequisite: ENGL U102.

MUSC U399. Independent Study in Music (3) An individualized program of study in the student's area of interest and in consultation with a faculty member. Prerequisite: Consent of instructor.

MUSC U490. Senior Seminar in Commercial Music (3) Research and study on selected music topics designed to integrate knowledge, develop a career portfolio, use technology, and gain experience in public presentation. The study topic will be presented as a lecture presentation and/or music recital. Only open to approved Commercial Music majors. Prerequisite: Senior standing and must have

already completed 15 credits in upper division Commercial Music Emphasis.

MUSC U499. Internship in Commercial Music (1-3)

Supervised work experience in commercial music outside the classroom. For three credit hours, a student is to work 135 hours; for two credit hours, 90 hours; for one credit hour, 45 hours. A contract must be signed by the student and appropriate faculty/administrators. Only open to Commercial Music majors or minors. Prerequisite: Junior or senior standing, minimum overall GPA 2.0, minimum 2.0 in major, and consent of the faculty supervisor.

NONPROFIT LEADERSHIP (NPAD)

(Please see Business.)

NURSING (NURS)

NURS U301. Nutrition (2) Nutritional needs across the life span and related strategies for promotion and maintenance of health. Concepts include nutrients, food groups, nutritional guidelines, and common diet modifications.

NURS U306. Introduction to Professional Nursing (4)

Concepts and theories that have shaped professional nursing practice. Critical thinking skills in the decision-making process will be introduced. Prerequisite: Admission to the Baccalaureate Nursing Program, Four-Year track.

NURS U308: Pathophysiological Topics in Health Care

(2) Expansion of critical thinking and understanding of the human disease process. Prerequisites: Admission to the Baccalaureate Nursing Program.

NURS U310. Health Assessment (3)

Comprehensive health assessment of well individuals across the life span. Emphasis is on data collection and the application of concepts and skills used in the comprehensive health assessment of patients as a basis for critical thinking in nursing practice. Practicum required. For Four-Year track, Prerequisite: Admission to Baccalaureate Nursing Program; Prerequisite or Corequisite: NURS U306. For RN track, Prerequisite: Admission to the Baccalaureate Nursing Program, or consent of instructor.

NURS U320P. Foundations of Nursing Practicum (3)

Application of knowledge and skills to implement basic nursing care. Practicum experiences provide for application of cognitive and psychomotor skills. Six practicum hours per week. Prerequisite: Admission to the Baccalaureate Nursing Program, Four-Year track; Prerequisites or Corequisites: NURS U306, NURS U308 (or BIOL U370), NURS U310; Corequisite: NURS U325P.

NURS U325P. Integrated Nursing Practicum (3)

Implementation of nursing process in health care environ-

ments for beginning integration of nursing knowledge and skills from health promotion, health assessment, nursing foundations, and introduction to professional nursing. Six practicum hours per week. Prerequisite: Admission to the Baccalaureate Nursing Program, Four-Year track; Prerequisites or Corequisites: NURS U306, NURS U308 (or BIOL U370), NURS U310; Corequisite: NURS U320P.

NURS U330. Health Alterations I (6)

Evidence-based nursing practice with adults experiencing health alterations, moving from simple to complex states of health and levels of care. Prerequisites: NURS U308 or BIOL U370, NURS U310, NURS U320P, NURS U325P. Corequisite: NURS U330P or NURS U331P. Prerequisite or Corequisite: NURS U375.

NURS U330P. Health Alterations I Practicum (0)

Implementation of evidence-based nursing practice, progressing in complexity, in a variety of settings with adults experiencing health alterations. A minimum of 84 practicum hours required. Corequisite: NURS U330.

NURS U331P. International Health Alterations I Practicum (0)

Implementation of evidence-based nursing practice, progressing in complexity, in an international setting with adults experiencing health alterations. A minimum of 84 practicum hours required. Language course preparation may be required. Corequisite: NURS U330.

NURS U340. Nursing of Childbearing Families and Women's Health (5)

Evidence-based nursing practice for women and parent-newborn dyad. Focus is on nursing interventions that promote, maintain and restore health of well and high-risk families during the childbearing process and women's health throughout the life span. Prerequisites: NURS U306, NURS U308 or BIOL U370, NURS U310, NURS U320P, NURS U325P; Corequisite: NURS U340P or NURS U341P.

NURS U340P. Nursing of Childbearing Families and Women's Health Practicum (0)

Implementation of concepts and skills to provide for families throughout the childbearing process and women throughout their life span. Practica are in traditional and non-traditional facilities. A minimum of 56 practicum hours required. Corequisite: NURS U340.

NURS U341P. International Nursing of Childbearing Families and Women's Health Practicum (0)

Implementation of concepts and skills to provide for families throughout the childbearing process and women throughout their life span in an international setting. A minimum of 56 practicum hours required. Language course preparation may be required. Corequisite: NURS U340.

NURS U350. Professional Nursing Role Transition (3)

Theories of nursing, systems, family, teaching-learning,

practice, education, role and change that are central to current professional nursing practice. Prerequisite: Admission to the RN-BSN track.

NURS U360. Child Health Nursing (5) Evidence-based nursing practice for children. Emphasis is on health promotion, maintenance, and restoration, using a family-centered approach. Prerequisites: NURS U306, NURS U308 or BIOL U370, NURS U310, NURS U320P, NURS U325P; Corequisite: NURS U360P or NURS U361P.

NURS U360P. Child Health Nursing Practicum (0) Implementation of evidence-based nursing practice for children and their families, in both acute care and community settings. A minimum of 56 practicum hours required. Corequisite: NURS U360.

NURS U361P. International Child Health Nursing Practicum (0) Implementation of evidence-based nursing practice for children and their families in an international setting. A minimum of 56 practicum hours required. Language course preparation may be required. Corequisite: NURS U360.

NURS U375. Pharmacology (2) Concepts underlying the pharmacotherapeutics of major drug classifications, including pharmacokinetics, pharmacodynamics, adverse drug reactions, and fundamental nursing decision making situations as related to pharmacology. Drug dosage computation is included. Prerequisite: NURS U308 or BIOL U370, NURS U306, U310, U320P, U325P. Prerequisite or Corequisite: NURS U330/U330P or U331P, U340/U340P or U341P and/or U360/U360P or U361P.

NURS U398. Nursing Externship (3-8) A concentrated preceptored experience in nursing enabling the student to expand previous clinical practice experiences and further develop skills in clinical reasoning, critical thinking, organization, and prioritization. For three externship credit hours, a minimum of 135 hours of scheduled clinical experiences, weekly seminars, and consultation with the instructor are required. A minimum of 45 hours for each additional credit hour is required. A student may repeat NURS U398 once in a different clinical setting for a total of not more than eight hours of undergraduate credit. Prerequisites: NURS U330, NURS U330P, NURS U340, NURS U340P, NURS U360, and NURS U360P. Pass/fail credit.

NURS U399. Independent Study (1-3) An individual learning experience in an area of special interest planned in conjunction with a nursing faculty member. For Four-Year track, Prerequisites: NURS U330, U330P, U340, U340P, U360, U360P; or consent of instructor. For RN-BSN track, Prerequisite: NURS U350; or consent of instructor.

NURS U410. Health Alterations II (6) Builds upon Health

Alterations I and continues to focus on evidence-based nursing practice, progressing in complexity, in a variety of settings with adults experiencing health alterations, moving from simple to complex states of health and levels of care. Prerequisites: NURS U330, U330/U331P, U340, U340/U341P, U360, U360/U361P, U375. Corequisite: NURS U410P or U412P.

NURS U410P. Health Alterations II Practicum (0) Builds upon Health Alterations I and related practicum and continues implementation of evidence-based nursing practice, progressing in complexity, in a variety of settings with adults experiencing health alterations. A minimum of 56 practicum hours required. Corequisite: NURS U410.

NURS U411P. Nursing Internship (2-4) A guided practicum experience utilizing clinical decision-making skills in a health care setting. For two internship credit hours, a minimum of 90 hours of scheduled clinical experiences, seminars, and consultation with faculty are required. A minimum of 45 hours for each additional credit hour is required. For Four-Year track, Prerequisites: NURS U330, U330/U331P, U340, U340/U341P, U360, U360/U361P. For RN-BSN track, Prerequisites: NURS U310, U350.

NURS U412P. International Health Alterations II Practicum (0) Builds upon Health Alterations I and related practicum and continues implementation of evidence-based nursing practice, progressing in complexity, in an international setting with adults experiencing health alterations. Minimum of 84 practicum hours required. Language course preparation may be required. Corequisite: NURS U410.

NURS U420. Current Topics in Nursing (3) Intensive study in a specialized area of professional nursing or a topic related to current health care practice. Selected area or topic is based on student interest and faculty expertise. Experiential learning activities may be required. For Four-Year track, Prerequisites: NURS U330, NURS U330P, NURS U340, NURS U340P, NURS U360, NURS U360P, NURS U425; Prerequisites or Corequisites: NURS U410, NURS U410P. For RN Completion track, Prerequisites: NURS U350, NURS U310; Prerequisite or Corequisite: NURS U425. Selected topics may be of interest to non-nursing majors. Non-nursing majors who have completed at least 60 credit hours, including completion of six hours of Group VIII General Education Requirements and one course which includes basic research methodology, and who have a collegiate summary GPA of 2.5 or higher may enroll with consent of the instructor. A student may take the course more than once as long as the repeat course is a different topic from previously completed NURS U420 course.

NURS U425. Nursing Research (3) Introduction to the language and underlying concepts as a basis for reading, understanding, and utilizing research as a source of

evidence for guiding practice. For the Four-Year track, Prerequisites: all required 300-level nursing courses. For the RN-BSN Completion track, Prerequisite: NURS U350, or consent of instructor.

NURS U427. Digital and Information Literacy for Nurses (3) An intensive study of essential digital, media and information literacies and their conceptual underpinnings critical to nursing practice in increasingly technology-mediated healthcare environments. Learners engage with new technology uses and skills while practicing proficient information analysis, synthesis and management with specific emphasis on nursing and health-care contexts. Prerequisites: NURS U310 and NURS U350.

NURS U428. Quality and Patient Safety (3) Learn and utilize quality and safety competencies to improve quality of nursing care to understand and use quality improvement concepts, process and outcome measures. Learn to conduct basic quality and safety investigations; development of quality improvement action plans and outcome measures; and monitor the results of those action plans within the clinical microsystems. Prerequisites: NURS U310 and NURS U350. Corequisite: NURS U427.

NURS U430. Leadership in Nursing Practice (3) Principles of leadership, management, and followership as they relate to the role of the professional nurse within the sociopolitical health care system. Emphasis is on first level management, team leadership, client advocacy, communication, critical thinking, decision making, role development within the profession, theoretical models, cultural diversity, and ethical leadership issues. For Four-Year track, Prerequisites: NURS U330, U330P, U340, U340P, U360, U360P, U375; Corequisites: none. For RN-BSN Completion track, Prerequisite: Admission to the BSN Program; Prerequisite or Corequisite: NURS U350.

NURS U441. Psychiatric Mental Health Nursing (6) Evidence-based psychiatric mental health nursing practice. Emphasis is on the promotion of mental health and prevention of mental illness, and on nursing interventions related to primary mental health alterations across the life span. Prerequisites: NURS U330, U330/U331P, U340, U340/U341P, U360, U360/U361P, U375. Corequisite: NURS U441P or NURS U442P.

NURS U441P. Psychiatric Mental Health Nursing Practicum (0) Implementation of evidence-based psychiatric mental health nursing practice in a variety of settings. Emphasis is on promotion of mental health and prevention of mental illness and on nursing interventions with individuals and groups of clients experiencing mental health alterations. Minimum of 84 practicum hours required. Corequisite: NURS U441.

NURS U442P. International Psychiatric Mental Health Nursing Practicum (0) Implementation of evidence-based psychiatric mental health nursing practice in an international setting. Emphasis is on promotion of mental health and prevention of mental illness and on nursing interventions with individuals and groups of clients experiencing mental health alterations. Minimum of 84 practicum hours required. Language course preparation may be required. Corequisite: NURS U441.

NURS U450. Health Alterations III (5) Builds upon Health Alterations I & II and continues to focus on evidence-based nursing practice with adults experiencing health alterations, moving from simple to complex states of health and levels of care. For Four-Year track, Prerequisites: NURS U410, U410/U412P, U425, U430, U441, U441/U442P; Corequisite: NURS U450P or NURS U451P.

NURS U450P. Health Alterations III Practicum (0) Builds upon Health Alterations Practica I & II and continues implementation of evidence-based nursing practice, progressing in complexity, in a variety of settings with adults experiencing health alterations. Minimum of 56 practicum hours required. Corequisite: NURS U450.

NURS U451P. International Health Alterations III Practicum (0) Builds upon Health Alterations Practica I & II and continues implementation of evidence-based nursing practice, progressing in complexity, in an international setting with adults experiencing health alterations. Minimum of 56 practicum hours required. Language course preparation may be required. Corequisite: NURS U450.

NURS U461. Community and Public Health Nursing (6) Evidence-based nursing with individuals across the life-span, families and other diverse population groups. Levels of prevention are explored in relationship to epidemiology and the effects of environment and lifestyle on client health. For Four-Year track, Prerequisites: NURS U425; Prerequisite or Corequisite: NURS U450, U450P, U497; Corequisite: U461P or NURS U471P. For RN-BSN track, Prerequisites: NURS U310, U350, U425; Corequisite: NURS U461P or NURS U471P.

NURS U461P. Community and Public Health Nursing Practicum (0) Implementation of evidence-based community and public health nursing practice in health promotion, maintenance, and restoration in individuals across the life-span, families, and other diverse population groups in community settings. Minimum of 84 practicum hours required. Corequisite: NURS U461.

NURS U471P. International Community and Public Health Nursing Practicum (0) Implementation of evidence-based community and public health nursing

practice in health promotion, maintenance, and restoration in individuals across the life-span, families, and other diverse population groups in an international setting. Minimum of 84 practicum hours required. Language course preparation may be required. Prerequisites: For Four-Year track students: completion of all first semester junior courses and consent of instructor. Corequisite: NURS U461.

NURS U497. Professional Nursing Issues (2) Critical exploration of interrelated historical, sociopolitical, and cultural issues impacting the professional nurse and the quality and delivery of health care. Prerequisite: final semester of the curriculum or consent of instructor.

NURS U499P. Senior Practicum in Professional Nursing (3) Capstone practicum, in a precepted setting, that provides opportunities to synthesize and apply knowledge and skills necessary to function as a beginning professional nurse. Emphasis is on the application of evidence-based knowledge in planning, delivering and evaluating nursing practice consisting of 124 hours of practicum. Prerequisites: NURS U410, U410P/U412P, U425, U430, U441/U442P/U441P. Prerequisites or Corequisites: NURS U450, U450P/U451P, U461, U461P/U471P, U497. Pass/fail credit.

PHILOSOPHY (PHIL)

PHIL U102. Introduction to Philosophy (3) Introduction to the main problems of philosophy and its methods of inquiry, analysis and criticism. Works of important philosophers are read.

PHIL U201. History of Ancient Philosophy (3) Introduction to the development of philosophy in the ancient world.

PHIL U202. History of Modern Philosophy (3) Introduction to the development of post-Renaissance philosophy with primary emphasis on the seventeenth and eighteenth centuries.

PHIL U211. Contemporary Moral Issues (3) Moral issues confronting men and women in contemporary society. Topics vary but may include discussion of problems related to abortion, drugs, euthanasia, war, social engineering, and punishment of criminals.

PHIL U309. Philosophy of Mind (3) A study of traditional problems pertaining to understanding the concept of mind, for example, the mind-body relation, personal identity, and theories of consciousness.

PHIL U311. Ethics (3) The moral principles of conduct and the basic concepts underlying these principles, such as good, evil, right, wrong, justice, value, duty and obli-

gation. The ethical works of influential philosophers are analyzed in terms of these concepts.

PHIL U319. Epistemology (3) The nature and foundations of knowledge with consideration of skepticism and problems of perception.

PHIL U321. Ethics of Computer and Information Technology (3) Moral issues raised by the use of computer and information technology. Topics include privacy, property rights, freedom of expression, and social justice. Prerequisite: Junior level standing or permission of the instructor.

PHIL U390. Topics in Philosophy (3) Selected topics in philosophy, planned around areas of interest. Prerequisite: junior or senior standing or consent of instructor.

PHYSICAL EDUCATION (EDPH)

EDPH U120. Strength and Conditioning Techniques (1) Comprehensive resistance training techniques including free weights, machine weights, powerlifting, plyometrics and functional training. Corequisite: EDPH U457 or consent of instructor.

EDPH U121. Golf (1) Skill development, playing strategy, knowledge of rules, scoring, and tournament play. Pass/fail credit.

EDPH U122. Tennis (1) Skill development, playing strategy, knowledge of rules, scoring, and tournament play. Pass/fail credit.

EDPH U123. Snow Skiing (1) Basic maneuvers of conditioning, turning stopping, and selection and care of equipment and clothing. Pass/fail credit.

EDPH U124. Walk/Jog/Run (1) Develop and carry out a personalized walking, jogging or running program by applying information on equipment selection, physiology, mechanics, psychology, training principles, conditioning, program guidelines, environmental concerns, nutritional guidelines, and injury prevention. Pass/fail credit.

EDPH U125. Combatives (1) Skill development, strategy, knowledge of rules, scoring, and tournament competition in wrestling, judo, karate, and boxing. Pass/fail credit.

EDPH U126. Introduction to SCUBA Diving (1) Basic techniques and skill development, care of equipment, and the principles and practices of safe SCUBA diving. Prerequisite: Ability to swim. Pass/fail credit.

EDPH U127. Handball and Racquetball (1) Skill development, playing strategy, knowledge of rules, scoring, and tournament play. Pass/fail credit.

EDPH U128. Aerobics (1) Participation and development of impact and low-impact aerobic routines. Selection of exercises and music are included. Pass/fail credit.

EDPH U129. Yoga (1) Flexibility training and strength development through participation in low impact movements with an emphasis on mind-body fitness. Pass/fail credit.

EDPH U130. Bowling (1) Skill development, playing strategy, knowledge of rules, scoring, and tournament play. Pass/fail credit.

EDPH U131. Badminton (1) Skill development, playing strategy, knowledge of rules, scoring, and tournament play. Pass/fail credit.

EDPH U132. Basketball (1) Skill development, playing strategy, knowledge of rules, scoring, and tournament play. Pass/fail credit.

EDPH U133. Rape Aggression Defense (1) Development and enhancement of self defense options for victims of physical aggression. Pass/fail credit.

EDPH U140. Adult Recreational Sports (1) Methods and materials for teaching activities of carry-over value adaptable to junior and senior high facilities. Such activities as boating, fishing, hunting, camping, backpacking, skiing, and recreational games are included. Pass/fail credit.

EDPH U141. Adventure Programming on a Ropes Course (1) Participation and development of specific group and individual attitudes and skills through the use of low and high elements of the USC Upstate ropes course. Pass/fail credit.

EDPH U142. Advanced Ropes Course Skills and Standards (1) Advanced certification as ropes course facilitator. Knowledge and experience in the setup, spotting, and safety practices employed in state-of-the-art ropes course uses. Prerequisite: EDPH U141. Pass/fail credit.

EDPH U143. Outdoor Climbing and Rappelling (1) Skill development, safety, spotting, safety practices, and knowledge of and use of proper equipment. Pass/fail credit.

EDPH U175. Team Building Activities (1) Team work development in critical motor skills in a physical education curriculum. Prerequisites: Physical Education majors only, or consent of instructor. Pass/fail credit.

EDPH U180. Swimming (1) Skill development, basic strokes, elementary diving, knowledge of water and pool safety. Pass/fail credit.

EDPH U200. Foundations of Physical Education (3) The scope of the physical education field, historical background, principles, philosophy, current issues, professional leadership and publications.

EDPH U223. Advanced Snow Skiing (1) Pole plant location, moguls, planning line, constant turns, and advanced trail skiing. Prerequisite: ability to snow ski. Pass/fail credit.

EDPH U235. Dance and Gymnastics (3) Skills analysis, methods and techniques for organizing and teaching dance, gymnastics and tumbling, including opportunities for peer teaching experience. Prerequisite or corequisite: EDPH U200 or EDRC U200 or consent of instructor.

EDPH U242. Principles of Recreation (3) The significance and meaning of leisure in modern society, theories of play, the recreational movement in the U.S., and programs of recreation in the school, community and industry.

EDPH U265. Officiating of Sports (3) Rules, officiating techniques, and problems arising in officiating, with emphasis on major team sports. Students are encouraged to obtain official's rating.

EDPH U270. Introduction to Athletic Training (3) Safety precautions, injury prevention, laboratory experiences, and legal issues in physical education and athletics. Prerequisite: BIOL U232.

EDPH U280. Swimming and Water Safety (1) The teaching of swimming and water safety, skill mastery, lifesaving, pool hygiene, management, and safety. For advanced swimmers. Pass/fail credit.

EDPH U301. Exercise Physiology (4) Physiological function of muscular, cardiovascular, and respiratory systems during exercise. Includes discussion of the metabolic systems that produce energy needed to perform vigorous exercise, the cardiovascular, muscular, and hormonal adaptations that result from various forms of training and the effects of various environmental conditions on human performance. Three class and two laboratory hours per week. Prerequisites: BIOL U232, and BIOL U242, or permission of instructor.

EDPH U302. Biomechanics (3) Functional anatomy, kinematic and kinetic analysis of body movement during sports activities. Prerequisite: BIOL U232.

EDPH U304. Motor Learning and Development (3) Processes associated with acquisition of psychomotor skill and the neuromuscular function involved in the control of movement. The application of the developmental processes as it relates to motor learning is also explored. A practicum is required. Prerequisite: EDPH U200.

EDPH U312. Teaching Secondary Physical Education (4) Orientation to teaching physical education in grades 6-12. Emphasis is on teaching styles, methods and curriculum. A practicum in the public schools is required. Prerequisites: EDPH U200, EDHL U221, junior stand-

ing, and Physical Education majors only, or consent of instructor.

EDPH U320. Team Sports I (3) Skills for basketball, flag football, and team building games. Students will learn proper skill progressions, techniques that are used to link fundamental movement with sports skills, and how to evolve simple strategies into more complex game play. Prerequisites: EDPH U200, Physical Education majors only, or consent of instructor.

EDPH U390. Field Experience (3) School or community experiences related to aspects of physical education. 100 hours of field work are required. Prerequisites: sophomore standing and consent of adviser, instructor and dean.

EDPH U395. Special Topics (3) Selected topics in Exercise and Sport Science. Topics vary depending on faculty expertise. This course may be repeated for credit if the topic is different. Prerequisites: junior standing, or permission of instructor.

EDPH U399. Independent Study (1-3) Topics assigned and approved by adviser, instructor and dean.

EDPH U405. Teaching Elementary Physical Education (4) Orientation to teaching physical education in grades PreK-5. Emphasis is on teaching styles, methods and curriculum. A practicum in the public schools is required. Prerequisites: Admission to the professional program and EDPH U312, or consent of instructor.

EDPH U415. Individual Sports (3) Skills for golf, tennis, and inline skating. Students will learn proper skill progressions, techniques that are used to link fundamental movement with sports skills, and how to evolve simple strategies into more complex game play. Prerequisites: EDPH U200, admission to the professional program, or consent of instructor.

EDPH U420. Team Sports II (3) Skills for volleyball, softball and soccer. Students will learn proper skill progressions, techniques that are used to link fundamental movement with sports skills, and how to evolve simple strategies into more complex game play. Prerequisites: Admission to the professional program, EDPH U200, or consent of instructor.

EDPH U445. Measurement and Evaluation of Physical Education (3) History, basic statistical techniques utilized in scoring and interpreting tests, evaluation of measures now available in the field, and the administration of a testing program. Prerequisites: Admission to the professional program and MATH U201 or PSYC U225 or SOCY U220.

EDPH U450. Clinical Experience (1) A supervised clinical experience in a selected physical education setting

designed to address any deficit in the required 100 hours of pre-student teaching practicum experience. Prerequisites: EDFO U210, EDPH U304, EDPH U312, EDPH U405, and the permission of the instructor.

EDPH U453. Organization and Administration of Physical Education (3) Organization and management of instructional, intramural, interscholastic, and recreational programs, with emphasis on criteria for the selection and evaluation of activities. Prerequisites: Admission to the professional program.

EDPH U455. Fitness Assessment and Prescription (4) Principles of exercise testing and prescription as they apply to fitness and performance, including the role of the health related components of fitness in performance, and/or physical fitness of normal and special populations, and the significance of cardiovascular programs through the life cycle. Prerequisites: EDPH U301, EDPH U302, and senior standing.

EDPH U457. Essentials of Strength and Conditioning (3) The scientific foundations of strength training and athletic conditioning, program design for both power and endurance athletes, performance-enhancing substances, performance testing, and facility organization and management. Prepares students to sit for the NSCA's Certified Strength and Conditioning Specialist exam. Prerequisites: EDPH U301, EDPH U302, and junior standing. Corequisite: EDPH U120.

EDPH U459. Sport Nutrition (3) Impact of optimal nutrition on exercise performance. Important topics include digestion, thermoregulation, metabolism and fuel usage, sports supplements, and weight control. Prerequisites: EDPH U301, and junior standing.

EDPH U460. Issues and Trends in Physical Education (3) Student reflection on the incorporation of accumulated knowledge into their student teaching clinical through the creation of the Teacher Work Sample. Prerequisite: Admission to Directed Student Teaching. Corequisite: EDPH U479.

EDPH U462. Physical Education for the Exceptional Child (3) Programs of developmental activity and guidance for students with restrictive disabilities. Included are techniques for appraising students with faulty body mechanics, orthopedic defects, and other atypical physical conditions along with methods of handling, within the regular physical education class, the various handicaps commonly found in the schools. Prerequisite: Admission to the professional program.

EDPH U479. Directed Teaching in Physical Education (12) A supervised clinical experience normally consisting of seven weeks in an elementary school and seven weeks

in a secondary school. The experience includes exploration of ethical issues, research through analysis and evaluation of teaching, and oral presentation of research results. Prerequisite: Approved application for directed teaching. Corequisite: EDPH U460. Pass/fail credit.

EDPH U480. Internship in Exercise and Sport Science (6) Guided practical experience in an elected, supervised setting appropriate to the chosen focus area. Prerequisite: EDPH U390 and junior standing.

EDPH U485. Senior Seminar (1) The integration of knowledge of recreation and individual professional activity at an advanced level utilizing research, oral presentation, a series of discussions, conferences, and role-playing experiences related to the various aspects of organized recreation as a career. Internships, employment opportunities, ethical issues, and other related topics are reviewed.

PHYSICS (PHYS)

PHYS U101. Introduction to Physical Science (3) Introduction to the concepts, ideas, and methods of physical science with emphasis on the principles of classical and modern physics and chemistry. Prerequisite: MATH U120 or higher, except statistics or higher placement in MATH.

PHYS U101L. Introduction to Physical Science Laboratory (1) Experiments, exercises, and demonstrations to accompany PHYS U101. Prerequisite or corequisite: PHYS U101.

PHYS U201, U202. General Physics I & II (4,4) Mechanics, heat, sound, wave motion, electromagnetism, optics, and modern physics. Three class, one recitation, and two laboratory hours per week. Prerequisite for U201: MATH U127 or consent of instructor. No previous background in physics is assumed. Prerequisite for U202: PHYS U201.

PHYS U211, U212. Essentials of Physics I & II (4,4) Mechanics, heat, wave motion, electromagnetism, optics, and modern physics taught from a calculus level. Three class, one recitation, and two laboratory hours per week. Prerequisite or corequisite for U211: MATH U142. Prerequisite for U212: PHYS U211.

POLITICAL SCIENCE (POLI)

POLI U101. American National Government (3) The formation and development of the national government, its organization and powers.

POLI U200. Introduction to Political Science (3) An introduction to ideas important in the study of politics.

Topics include the concept of power and the nature of the state as seen in the ideologies of totalitarianism, fascism, socialism, communism, liberalism and pluralism.

Note: POLI U200 must be completed prior to enrolling in upper division POLI courses. Written consent of a Political Science instructor can override this requirement when deemed appropriate.

POLI U210. Research Methods in Political Science (3) Various approaches to the rigorous study of political phenomena. The emphasis is upon the critical thinking and evaluative skills necessary to the understanding of politics. Among the techniques to be considered are surveys, charts and graphs, case studies, and statistical summaries.

POLI U238. Fundamentals of Political Behavior (3) Interpretation of the basic concepts relative to American political behavior. Focus on political ideology, political culture, including political socialization, and both individual and group political behavior.

POLI U300. Introduction to Political Theory (3) A survey of various concepts in western political philosophy such as political obligation, freedom, equality, justice, rights, authority, and power.

POLI U310. International Politics (3) An introduction to the basic factors influencing nation-state behavior in the world: the nation-state system, nationalism and imperialism, national power, and the present world crisis. The role of the United States in the world community is emphasized.

POLI U312. Race and Ethnicity in American Politics (3) Impact of race and ethnicity on political participation, representation, institutions, and the evolution of public policy.

POLI U320. Comparative Politics (3) An introduction to the analysis of the major types of political systems utilizing examples drawn from democratic, communist and underdeveloped nation-states. Problems, approaches and methods associated with the comparative field are emphasized.

POLI U324. Campaigns and Elections (3) The function, organization, actors, and consequences of campaigns and elections in American politics. Particular races and campaigns will be featured as examples for research into how campaigns work and why they matter.

POLI U325. African Politics (3) Comparative study of political processes within African countries and their relations with other states, particularly former colonial powers.

POLI U326. Middle East Politics (3) Comparative study of political processes within Middle Eastern countries and

their relations with other states, particularly the United States.

POLI U327. East Asian Politics (3) Comparative study of political processes within East Asian countries and their relations with other countries, particularly the United States.

POLI U330. International Organizations (3) An introduction to the structure and functions of international political and economic organizations. Particular attention is given to the United Nations and its specialized agencies and to emerging regional communities.

POLI U340. United States Foreign Policy (3) Formulation of American foreign policy, problems of security, trade and diplomacy. Policies related to specific nation-states and regions will be emphasized.

POLI U350. Women and American Politics (3) The participation of women in American political life and their influence in electoral politics and issue-based movements.

POLI U360. American Political Parties (3) The functions, history and future of political parties in the United States. Emphasis is on the development of political parties and the consequences of that development upon the party as an organization, the party as an electorate, and the party in the government.

POLI U361. Political Behavior (3) Political participation in the United States through such activities as interest groups, political protest, contacting officials, voting, running for office. Who participates and why, and the consequences of participation for policy decisions and for society are also examined.

POLI U363. Southern Politics (3) Selected political patterns and trends within the eleven states of the American South including historical developments since 1950.

POLI U364. State and Local Government (3) The institutions, functions, policy making processes, and politics of state and local governments including an examination of the relations between state and local government, and the relations between state and local government and the national government.

POLI U365. Politics and Media (3) Interpretation of the pivotal role of media in contemporary American politics. Familiarizes the student with fundamental concepts regarding the pervasive role of media in how it shapes our life, political ideology, political culture and political behavior.

POLI U370. Introduction to Public Administration (3) The basic principles and theory of administrative structure, responsibility, and control in relation to policy making in the modern state.

POLI U374. Introduction to Public Policy (3) Social, political, and technical forces in policy making including various theories of public policy and inquires into selected policy areas. Current policy issues are included and integrated into the larger theories of decision making.

POLI U380. Environmental Policy (3) An investigation of American national and international issues relating to the ecological basis of human living. Special attention is on environmental issue-areas including air, water, forests, soil erosion, and wildlife as well as the impact of population, the economy, and technology on the quality of the environment.

POLI U385. American Political Thought (3) A survey of American political theorists from the colonial period to the present with an examination of the social, cultural, historical and scientific developments that have contributed to the nature of American political thinking.

POLI U386. Art and Politics (3) A presentation of the connection between art and political thought. The course focuses on architecture, painting, and music as they express political values and attitudes.

POLI U390. Urban Planning & Policy (3) Urban planning as an area of public policy. Emphasizes identifying urban sprawl and studying its effects on the social, psychological, environmental, physical, and financial well-being of cities and city residents.

POLI U399. Independent Study (1-6)

POLI U400. Terrorism and Political Violence (3) Forms, causes, and consequences of political violence with special attention to terrorism.

POLI U403. History of Western Political Thought (3) A survey of political theories propounded by western political philosophers from Plato to Nietzsche.

POLI U420. Women and Politics: A Global Perspective (3) Women's status and political activism around the globe. The focus is on similarities and differences and the bases for them. Prerequisite: POLI U320 or consent of instructor.

POLI U445. Public Policy Seminar: K-12 School Reform (3) Examination of current K-12 school reform efforts as public policy initiatives. Analysis of various models and approaches as appropriate methods of stabilizing and changing public schools as institutions fundamental to American society.

POLI U450. Constitutional Law (3) The evolution of governmental powers focusing on the judiciary, the presidency, congress, the states, and intergovernmental relations.

POLI U451. Civil Rights and Civil Liberties (3) Freedom of religion, freedom of speech and association, due process, equal protection, and criminal procedure.

POLI U452. The Judicial Process (3) The growth of law, the lawmaking of the courts, the structure and organization of federal and state courts, the procedures involved in civil and criminal cases, and the problems and proposals for reform in the administration of justice.

POLI U460. International Law (3) History and basic principles of law among nation-states. Emphasis is upon the scope of international law and the extent to which law shapes the behavior of international actors.

POLI U462. The Legislative Process (3) Structure, organization, powers, functions and problems of legislative bodies.

POLI U463. The American President (3) The constitutional powers and political roles of the president with lesser emphasis upon state governors. Emphasis is placed on the chief executive and administration, executive relationships with legislatures, and party and popular leadership by the executive.

POLI U481. The Politics of Inequality (3) The progress made by, and relationship between, the struggles for racial, gender, and economic equality in America. Topics include theories of justice, the nature of oppression, political participation, and the philosophical and legal development of equal rights.

POLI U491. Topics in Political Science (1-3) May be repeated once as topics change.

POLI U495. Political Science Internship (1-6) Supervised work experience in a political or governmental environment. A minimum of three hours work per week is required for each credit hour. Students are required to meet periodically with the supervising faculty member. Prerequisites: junior or senior standing and consent of the instructor. Students are limited to a maximum of six hours combined from POLI U495 and U496.

POLI U496. Public Administration Internship (1-6) Supervised work experience in a public administration environment. A minimum of three hours work per week is required for each credit hour. Students are required to meet periodically with the supervising faculty member. Prerequisites: junior or senior standing and consent of the instructor. Students are limited to a maximum of six hours combined from POLI U495 and U496.

POLI U500. Senior Seminar (3) Exploration, at an advanced level, of issues, topics and dilemmas in both the subject matter and the profession of political science with

emphasis on research and oral presentation of research findings. The specific topics covered in the course vary. Prerequisites: 12 hours of POLI at the 300-level or above, or consent of instructor.

POLI U571. Public Financial Administration (3) Principles and practices of financial administration including organization, budgeting, assessment, treasure management, and debt.

POLI U572. Public Personnel Management (3) Fundamental principles of personnel organization and administration, including an analysis of personnel techniques.

PRE-LAW (PLAW)

PLAW U101. Introduction to Pre-Law (1) The basics of law, preparing for the LSAT, the realities of law school and life as a lawyer. Pass/fail credit.

PLAW U495. Pre-Law Internship (3) Supervised work experience in a legal environment. A minimum of 9 hours per week of work. Students are required to meet periodically with the supervising faculty member. Pass/fail credit.

PSYCHOLOGY (PSYC)

Note: Psychology 101 is a prerequisite for all other psychology courses unless otherwise specified.

PSYC U101. Introduction to Psychology (3) Survey of major topics in psychology (learning, perception, motivation, intelligence, etc.), and an introduction to methods used in psychological investigation.

PSYC U225. Psychological Statistics (3) Statistical principles, including measures of central tendency, variability, relative standing, probability, techniques of regression and correlation, statistical hypothesis testing, analysis of variance and nonparametric statistics with applications in the social sciences. Prerequisites: PSYC U101, placement in MATH U121 or higher.

PSYC U300. Topics in Psychology (3) Survey of a selected topic planned around an area of faculty interest. Prerequisite: PSYC U101.

PSYC U302. Developmental Psychology (3) Introduction to life span developmental psychology providing an overview of cognitive, social, emotional, and physical development from conception to senescence. Prerequisite: PSYC U101.

PSYC U303. Psychology of Learning and Memory (3) Introduction to basic principles and theories of learning

and memory including such topics as habituation, classical and instrumental conditioning, verbal learning, social learning theory, behavior modification, and modeling. Prerequisite: PSYC U101.

PSYC U304. Cognitive Psychology (3) Higher mental processes including such topics as pattern recognition, attention, memory, language perception and production, decision making, problem solving, concept formation and cognitive growth. Behavioral and neuropsychological perspectives are considered. Prerequisite: PSYC U101.

PSYC U305. Sensation and Perception (3) The basic principles involved in vision, audition, taste, smell and skin senses. Topics include the structure and function of the various sensory systems and related brain areas, measurement of sensory experiences, and perceptual information processing such as perception of color, pattern, movement, depth, music, and speech. Prerequisite: PSYC U101.

PSYC U307. Social Psychology (3) The principles governing human interaction including factors such as group dynamics, leadership, prejudice and propaganda. Prerequisite: PSYC U101.

PSYC U308. Physiological Psychology (3) Basic neural and endocrine processes and their correlation with behavior. Prerequisite: PSYC U101.

PSYC U309. Psychology of Personality (3) The major theories of personality and the factors involved in the development of personality. Prerequisite: PSYC U101.

PSYC U310. Abnormal Psychology (3) The nature of mental and emotional disorders including such topics as theories of emotional disorders and the causes and treatment of various disorders. Prerequisite: PSYC U101.

PSYC U311. Industrial and Organizational Psychology (3) Survey of the theoretical and empirical foundations of human behavior in industries and organizations. Special consideration is given to applied problems as they relate to improving relationships between individuals and organizations. Prerequisite: PSYC U101.

PSYC U325. Research Methods for Psychology (4) Introduction to research methods for the study of behavior. Lectures, class discussion, and laboratory exercises drawn from diverse areas of psychology are used to provide practical knowledge and skill in data analysis, experimental design, and writing technical reports. Prerequisite: PSYC U101. Prerequisite or Corequisite: PSYC U225.

PSYC U330. Applied Psychology (3) Introduction to the practical applications of psychology in such areas as mental health, industry, schools, law enforcement, and advertising. Prerequisite: PSYC U101.

PSYC U350. Psychology of Adjustment (3) The process by which people adjust to the demands made upon them as a result of living with others. Basic processes of motivation and learning are examined, especially as these relate to the acquisition of the mechanisms of adjustment. Prerequisite: PSYC U101.

PSYC U351. Psychology of the Exceptional Individual (3) Causes and characteristics of sensory, cognitive, and motor skills and the behavior and potential of exceptional individuals. Prerequisite: PSYC U101.

PSYC U360. Human Sexual Behavior (3) Psychological, physiological, and sociological factors in human sexual behavior and attitudes. Prerequisite: PSYC U101.

PSYC U399. Independent Study (1-6) An individualized program of study planned in conjunction with a psychology faculty member. Prerequisite: PSYC U101.

PSYC U400. Advanced Topics in Psychology (3) Intensive study of a selected topic planned around an area of faculty or student interest. Prerequisite: PSYC U101 and one 300-level psychology class.

PSYC U402. Experimental Topics in Psychology (3) The formation of testable hypotheses, methodological design, data collection and analysis, critical evaluation and scientific documentation as applied to a particular content area in psychology. Laboratory experiences are an integral part of this course. May be repeated once upon change of topic. Prerequisites: PSYC U101, PSYC U225, PSYC U325.

PSYC U412. Theories of Counseling and Psychotherapy (3) The different approaches to counseling and psychotherapy with emphasis on both theory and technique. Prerequisites: PSYC U101 and PSYC U309.

PSYC U417. Psychological Tests (3) Theory, development, and application of intelligence, achievement, aptitude, and personality assessment measures. Prerequisite: PSYC U101 and PSYC U225.

PSYC U421. History and Systems of Psychology (3) Historical roots of modern psychological theories and a survey of various present-day approaches. Prerequisite: PSYC U101, two 300-level psychology courses, and junior standing.

PSYC U442. Psychology of Women (3) Women's experiences, present day status and life-styles, and the biological and cultural antecedents of women's roles. Prerequisite: PSYC U101.

PSYC U499. Psychology Internship (1-6) Supervised work experience in community agency or hospital. Fifty

hours of work for each credit hour are required. Prerequisites: Psychology major, PSYC U325 with a minimum grade of C, senior standing and consent of instructor.

PSYC U502. Senior Seminar: Special Topics in Psychology (3) Selected topics in psychology planned around areas of faculty interest and competence. Prerequisites: PSYC U101, PSYC U225, PSYC U325, PSYC U402. In order to enroll in senior seminar, a student must have completed all of the prerequisite courses with a minimum grade of C.

RELIGION (RELG)

RELG U103. Comparative Religion (3) Beliefs and principles of the major faiths of Asia, the Middle East, and Africa, viewed from historical, cultural, and theological perspectives.

RELG U300. Asian Religious Traditions (3) History, beliefs and practices of Hinduism, Buddhism, Confucianism, Taoism, Shinto and "popular" religion in Asia through modern times. Emphasis on the roles of religion in the history and culture of South Asian and East Asian societies. Prerequisite: Sophomore standing or consent of instructor.

RELG U301. Western Religious Traditions (3) History, beliefs, values and practices of Judaism, Christianity and Islam through modern times, with a comparative perspective on law, institutions, scripture, gender and religious thought. Prerequisite: Sophomore standing or consent of instructor.

RELG U360. Modern Islam (3) Modern history, beliefs, values and practices of Muslim communities worldwide, with focus on contemporary Islamic approaches to law, institutions, politics, scripture, and gender. Prerequisite: Sophomore standing or consent of instructor.

RELG U399. Topics in Religion (3) Specific themes, regions, or traditions in religion. May be repeated for credit when topics vary. Prerequisite: Sophomore standing or consent of instructor.

SOCIOLOGY (SOCY)

Note: Sociology 101 is prerequisite to all other sociology courses. Sociology 101, 201, 301, 302 and 499 are core courses.

SOCY U101. Introduction to Sociology (3) Introduction to the major theoretical and methodological perspectives used to explain, investigate and analyze social life.

SOCY U201. Introduction to Statistics for the Social Sciences (3) Fundamental principles of descriptive and inferential statistics as used in the social sciences, including measures of central tendency and variation, the normal approximation, probability, chance variability, estimation, hypothesis testing, and correlation.

SOCY U301. Sociological Theory (3) Roots and historical development of various sociological lenses as tools for examining the social world.

SOCY U302. Sociological Research Methods (3) Quantitative, qualitative and comparative methods used in social science research, focusing on research design, data collection and analysis, and ethical issues. Prerequisite or corequisite: SOCY U301 or consent of instructor.

SOCY U310. Individual and Society (3) Selected theoretical orientations, methodological procedures, and research findings pertaining to the relations between the individual and society.

SOCY U311. Social Problems (3) Content selected for contemporary importance and sociological relevance.

SOCY U320. Sociology of Aging (3) Processes of aging as a form of socialization and demographic reality, including institutional effects. The status of the elderly and the sources of prejudice and discrimination they experience are emphasized.

SOCY U321. Animals and Society (3) Sociological perspectives on human-animal interaction and the role of animals in society.

SOCY U323. Urban Sociology (3) Characteristics, causes, and impacts of city life. Different types of urban areas and current issues are examined from comparative, historical, and global perspectives.

SOCY U325. Social Movements (3) Characteristics, causes, and impacts of social and political movements in the modern world. Different types of movements, including the American civil rights movement, are examined from comparative, historical, and global perspectives.

SOCY U327. Population Dynamics (3) (=GEOG U340) Issues in measurement of the distribution and development of human population. Applies the analytical methods used in accounting for the effects of births, deaths and migrations.

SOCY U328. Social Demography (3) Selected theoretical orientations, methodological procedures and historical perspectives related to the social analysis and context of demographic change.

SOCY U329. Social Change (3) Applies sociological lenses

to current major social, cultural, economic, political, and global transformations, emphasizing their interrelationships.

SOCY U330. Social Inequality (3) Theoretical perspectives and research on the unequal distribution of wealth power, and prestige in social life on a global, national, and local scale. Attention is given to the impact of globalization on social stratification.

SOCY U333. Race and Ethnic Relations (3) Examines the basic concepts of race and ethnicity, relevant sociological theories, and their application to critical issues.

SOCY U337. Gender and Society (3). A sociological investigation of gender as a fundamental principle of social life. The interdependence of gender constructions and of societies' inequality structures across social institutions is explored.

SOCY U339. Women and Armed Conflict (3) Women's lives in the context of armed conflict examined from comparative, historical and global perspectives.

SOCY U341. Sociology of Families (3) Methods and theories used in the examination of intimate human relationships, including parenting, violence and abuse, and divorce and remarriage. Emphasizes the social factors that bring about change in family-related behaviors and create diversity in family forms.

SOCY U343. Political Sociology (3) The societal conditions affecting political ideas, institutions, and practices. The role of politics in society is examined from comparative, historical, and global perspectives.

SOCY U345. Sociology of Religion (3) The societal conditions affecting religious beliefs, institutions, and practices. The role of religion in society is examined from comparative, historical, and global perspectives.

SOCY U347. Sociology of Organizations and Work (3) Sociological investigation of how post-industrial society and globalization impact the workplace, jobs, workers, gender, families and communities. The role of leadership in organizations is also examined.

SOCY U349. Displaced Persons (3) Characteristics and causes of displacement and their impacts on people's lives. Different types of displacement, with emphasis on traumatic events, are examined from comparative, historical, and global perspectives.

SOCY U351. Social Deviance (3) (=CRJU U474) Theories, methods and substantive issues in the creation, involvement, recognition and control of deviance. Sociological theories and pertinent research data are integrated in the context of contemporary societal issues.

SOCY U353. Sociology of Crime (3) Social factors in the development, identification, and treatment of crime and criminals.

SOCY U355. Juvenile Delinquency (3) (=CRJU U345) Social factors in the development, identification and treatment of delinquents and juvenile delinquency in the context of juvenile justice systems.

SOCY U357. Sociology of Mental Health and Mental Illness (3) Social factors in the development, identification, and treatment of mental illness.

SOCY U361. Medical Sociology (3) The social organization of medicine including patterns of morbidity and mortality, the social and cultural factors influencing disease, and the organization of the health care system in the United States.

SOCY U363. Sociology of Death and Dying (3) A sociological and cross-cultural perspective on dying, death, and bereavement in contemporary society.

SOCY U391. Special Topics (3) Emerging issues in contemporary sociology. Selected topics organized around faculty and student areas of special interest. This course can be taken more than once if the topic is different.

SOCY U395. Internship (3) Supervised work experience in a community agency based on an individualized, contracted program planned in conjunction with the relevant sociology faculty member. Ten hours per week in the field placement, at least three class meetings, and a formal, written sociological analysis of the field experience are required. The course may be taken more than once, but may be applied toward major credit in sociology only once. Normally offered every spring semester.

SOCY U399. Independent Study (1-6) An individualized, contracted program of study planned in conjunction with a sociology faculty member.

SOCY U499. Senior Seminar (3) A capstone course designed around topics selected by faculty. Emphasis is on research with written and oral presentations. Prerequisites: SOCY U201, U301, U302, and 15 additional hours of upper level sociology with a C or better.

SPANISH (SPAN)

Note: Unless otherwise indicated, readings, lectures and discussion in foreign language courses above the elementary level are principally in the language concerned. Incoming students with previous experience in a foreign language must take a placement test.

SPAN U101. Introductory Spanish I (3) Fundamentals of the language and culture through speaking, listening, reading, and writing.

SPAN U101B. Introductory Spanish I: Business(3) Fundamentals of the language and culture through speaking, listening, reading, and writing with a focus on the language for business professionals.

SPAN U101N. Introductory Spanish I: Health Professions (3) Fundamentals of the language and culture through speaking, listening, reading, and writing with a focus on the language for health care professionals. Those completing SPAN U101N should plan to continue in SPAN U102N.

SPAN U102. Introductory Spanish II (3) Fundamentals of the language and culture through speaking, listening, reading, and writing. Prerequisite for SPAN U102 is SPAN U101.

SPAN U102B. Introductory Spanish II: Business (3) Fundamentals of the language and culture through speaking, listening, reading, and writing with a focus on the language for business professionals. Prerequisite for SPAN U101B or placement through testing.

SPAN U102N. Introductory Spanish II: Health Professions (3) Fundamentals of the language and culture through speaking, listening, reading, and writing with a focus on the language for health care professionals. Those enrolling in SPAN U102N are strongly encouraged to have completed SPAN U101N. Prerequisite: SPAN U101N, SPAN U101, or placement through testing.

SPAN U201. Intermediate Spanish (3) Review of the basic principles of the language, with emphasis on reading, writing, and oral skills. Prerequisite: SPAN U102 or placement through testing.

SPAN U202. Intermediate Spanish (3) Review of the basic principles of the language, with emphasis on writing, oral skills, and the reading of literary and other authentic texts. Prerequisite: SPAN U201 or placement through testing.

SPAN U250. Selected Spanish Studies Abroad (3-6) Development of intermediate level communication skills together with immersion in the culture of a foreign country. Prerequisite: SPAN U102 or consent of instructor.

SPAN U300. Topics in Conversation (3) Development of intermediate/advanced communication skills through discussions of current topics. Topic examples include pop culture, news, or popular literature. Emphasis on oral skills and listening comprehension. Course intended for non-native speakers. Prerequisite: SPAN U201.

SPAN U301. Introduction to Hispanic Literature (3) Reading Hispanic literary texts/literary criticism. Focus is on literary terms and their applications in close readings of Spanish and Spanish-American texts. Prerequisite: SPAN U202, or consent of instructor.

SPAN U304. Hispanic Culture (3) Readings and visuals emphasizing a comparative approach to the historical, economic, cultural and social developments in the Spanish-speaking Caribbean, Latin America and the United States. Prerequisite: SPAN U202 or consent of instructor.

SPAN U309. Advanced Spanish Language I (3) Fundamental elements of the language and exercises in composition. Prerequisite: SPAN U202 or consent of instructor.

SPAN U310. Advanced Oral Practice (3) Development of oral skills, vocabulary and phonetic fluency through presentations, discussions and group activities. Prerequisite: SPAN U202 or consent of instructor.

SPAN U311. Introduction to Non-Literary Translation (3) Theoretical grounding and practical problems of professional translation (Spanish/English; English/Spanish). Translation of short legal, medical and commercial texts in their linguistic and cultural context and an overview of the translator profession in the USA are studied. Prerequisites: ENGL U252 and SPAN U202; or SPAN U309; or consent of the instructor.

SPAN U312. Introduction to Interpreting (3) General understanding of the problems for facilitating oral communication between monolingual speakers of English and Spanish. Develops basic skills for professional interpreting in its cultural context with practical exercises through role playing and the use of audio and audio visual material. Prerequisites: SPCH U201 and SPAN U202; or SPAN U310; or consent of the instructor.

SPAN U314. Advanced Spanish Language II (3) Continued practice of the fundamental elements of the language and exercises in composition. Prerequisite: SPAN U309 or consent of instructor.

SPAN U315. Spanish for the Professions (3) Practice in oral and written language pertinent to specific careers, such as health care, criminal justice or business. Course may be repeated once with change in professional topic. Prerequisite: SPAN U202 or consent of instructor.

SPAN U320. Spanish Civilization (3) Culture and civilization of Spain. Prerequisite: SPAN U202 or consent of instructor.

SPAN U321. Latin American Civilization (3) Cultural heritage of the Latin American people from the pre-Co-

lumbian period to the present. Prerequisite: SPAN U202 or consent of instructor.

SPAN U330. Survey of Spanish Literature I (3) Representative authors and works from Medieval, Renaissance, and Golden Age Literature. Prerequisite or Corequisite: SPAN U301 or consent of instructor.

SPAN U331. Survey of Spanish Literature II (3) Major movements, principal authors, and representative works in Spanish literature since 1700. Prerequisite or Corequisite: SPAN U301 or consent of instructor.

SPAN U332. Survey of Spanish American Literature I (3) Representative authors and works from pre-Columbian times through the colonial era. Prerequisite or Corequisite: SPAN U301 or consent of instructor.

SPAN U333. Survey of Spanish American Literature II (3) Major movements, principal authors, and representative works from the nineteenth century to the present. Prerequisite or Corequisite: SPAN U301 or consent of instructor.

SPAN U350. Selected Spanish Studies Abroad (3-6) Development of advanced level communication skills together with immersion in the culture of a foreign country. Prerequisite: SPAN U202 or U250 or consent of instructor.

SPAN U398. Topics in Spanish Language or Literature (3) Intensive study in selected areas chosen by the instructor. Prerequisite: SPAN U301 or consent of instructor.

SPAN U399. Independent Study or Internship (1-3) Supervised professional experience or research outside the classroom. For three internship credit hours, a student is to work 135 hours with an approved agency; for two credit hours, 90 hours; for one credit hour, 45 hours. For an internship or for an independent study, a contract must be signed by the student and by the instructor of record and other designated faculty and administrators. A student may repeat SPAN U399 once with a different internship or independent study contract description for a total of no more than six hours of undergraduate credit. Prerequisites: GPA 2.0 overall, 2.5 in foreign language courses, and consent of faculty supervisor.

SPAN U420. U.S. Latino Literature (3) A core grouping of Latino authors who were either born or raised in the United States and whose texts are written primarily in English. The selected texts are bilingual. Prerequisite: SPAN U309 or consent of instructor.

SPAN U431. Masterworks of Hispanic Literature (3) Selected masterpieces written in Spanish. Selections are samplings of great literature from the Spanish-speaking

world. Prerequisite or Corequisite: SPAN U301 or consent of instructor.

SPAN U451. Second Language Acquisition (3) An introduction to major learning theories with particular focus on those dealing with acquisition of a second or foreign language. Field experience is required. Prerequisite: SPAN U202.

SPAN U453. Introduction to Romance Linguistics (3) Descriptive and historical analyses of the Romance languages, beginning with their origins in Latin. Prerequisite: SPAN U309 or FREN U309 or consent of instructor.

SPAN U454. Spanish Linguistics (3) Basic concepts and terminology essential to the study of Spanish phonology and phonetics, morphology, syntax, lexicon, semantics, language change and language variation. Prerequisite: SPAN U309 or consent of instructor.

SPAN U490. Senior Seminar in Spanish (3) Reading and research on selected topics designed to integrate knowledge, to explore ethical issues, and to gain experience in research and oral presentation. Prerequisite: SPAN U301, U309, U310, U314 and three additional upper division Spanish courses. Corequisite: senior standing.

SPEECH (SPCH)

SPCH U201. Public Speaking (3) Oral communication and speaking before an audience. Prerequisite: ENGL U102 or consent of instructor.

SPCH U201H. Public Speaking Honors (3) An in-depth consideration of theories and principles of speech construction, analysis and delivery. The writings of classical and contemporary philosophers, theorists and rhetoricians are considered. Intensive reading, writing, research, delivery and a service component are included. Prerequisites: ENGL U102; admission to honors program as a second year student or permission of director of honors program.

SPCH U301. Theories and Principles of Human Communication (3) Theories, principles and functions of human communication. Topics include culture, nonverbal communication, listening skills, self-disclosure, perception and interviewing. Prerequisites: ENGL U102 or consent of instructor.

SPCH U303. Ethics in Human Communication (3) An investigation of ethical principles relevant to interpersonal, small group and organizational communication. The relationship among philosophy, rhetoric, ethics and human communication is explored. Prerequisite: SPCH U301 or consent of instructor.

SPCH U309. Small Group Communication (3) Exploration of small groups in multiple communication contexts. Emphasis is placed on the foundation of group communication, including organizing groups, improving communication skills, managing conflict, and problem-solving techniques. Prerequisites: SPCH U201 or consent of instructor.

SPCH U310. Interpersonal Communication (3) The study of the communication process as a form of practical action between individuals. The classroom functions as an interpersonal laboratory to study and practice interpersonal skills through discussions, exercises and projects. Prerequisites: SPCH U201 or consent of instructor.

SPCH U312. Rhetorical Theory and Criticism (3) Historical development of rhetorical studies in communication, from classical Western antiquity to the present. Emphasis is placed on the conceptualizations of rhetoric in different historical contexts and introduction to a selection of contemporary approaches (critical methods); fundamentals of argumentation, the principle elements of rhetorical style; and surveying several established methods and procedures of rhetorical criticism. Prerequisite: SPCH U201.

SPCH U333. Advanced Public Speaking (3) The principles and theories of speech composition. Areas of focus include rhetorical theory, strategic organization, evidence, reasoning and delivery. Prerequisite: SPCH U201 or consent of instructor.

SPCH U340. Voice and Diction (3) The analysis, evaluation, and improvement of speech based on the anatomy and physiology of the vocal mechanism, voice production, and articulation.

SPCH U350. Communication & Gender (3) Exploration of gender in multiple communication contexts. Emphasis is placed on the role of gender in everyday life through the study of theory, personal experience, and media representation. Prerequisites: SPCH U201 or consent of instructor.

SPCH U380. Intercultural Communication (3) An introduction to the theory and practice of difference-based communication. Students investigate the communicative impact of significant cultural differences in values, perceptions and behavior. Prerequisite: ENGL U102.

SPCH U398. Topics in Speech Communication (3) A specific area of speech is explored. Individual topics are announced.

SPCH U440. Argumentation and Debate (3) Fundamental principles, skills and ethics of argument. In-class debates required. Prerequisites: SPCH U201 or consent of instructor.

SPCH U448. Organizational Communication (3) Theories, research and functions of communication in organizations, including communication practices and strategies in professional and social settings. Prerequisites: SPCH U201 or permission of the instructor.

SPCH U450. Communicating for Social Change (3) An introduction to theories and principles essential to understanding the communicative function and processes of social movements. The construction and presentation of persuasive messages intended to produce social change are emphasized. Prerequisite: SPCH U201.

STATISTICS (STAT)

STAT U301. Statistical Computing (3) Data entry, sorting and merging, data summarization, graphical display, reports, and statistical inferences using statistical softwares. Prerequisite: Any college-level statistics or consent of instructor.

STAT U410. Introduction to Probability Theory (3) Laws of probability and sample space; discrete and continuous distributions; joint, marginal and conditional densities; moment generating functions; univariate and bivariate normal distribution. Prerequisite: C or better in MATH U142 or consent of instructor.

STAT U413. Introduction to Stochastic Processes (3) Markov chains; Poisson processes; introductory renewal theory, Brownian motion and stationary processes used in mathematical modelling. Prerequisite: C or better in STAT U410 or consent of instructor.

STAT U512. Mathematical Statistics (3) A comprehensive development of statistical analysis that builds upon a knowledge of probability and basic statistics. Topics include sampling distributions, interval and point estimation, the law of large numbers, limiting distributions, testing hypotheses and order statistics. Prerequisite: STAT U410 or consent of instructor.

STAT U516. Statistical Methods II (3) More advanced development of solutions to problems involving statistics. Topics include experimental design, analysis of variance, analysis of covariance, multiple linear regression, curvilinear regression, and logistic regression. Prerequisite: MATH U315 or consent of the instructor.

STAT U598. Topics in Statistics (3) Intensive study in a specialized area of statistics. Selected topic is based on student interest and faculty expertise. Prerequisite: MATH U315 or consent of instructor.

STAT U599. Seminar in Statistics (3) Integration of knowledge at an advanced level, a review of recent devel-

opments and models in theoretical and applied statistics, along with research and oral presentation. Prerequisite: STAT U301 and MATH U315 or consent of instructor.

THEATRE (THEA)

THEA U161. Introduction to Theatre Art (3) Understanding and criticism of dramatic literature, history, and production.

THEA U170. Fundamentals in Acting (3) The technique of body and voice control, improvisation, interpretation of characters, and characterization applied in scenes.

THEA U260. Theatre Laboratory (1) Participation in theatre production, including stage management, direction, costumes, makeup, lighting, sound, scenery, and business management. No formal class meetings. May be repeated for a total of four credits.

THEA U261. Rehearsal and Performance (1) Participating in acting in a University production. No formal class meetings. May be repeated for a total of four credits. Pass/fail credit.

THEA U301. Dramatic Theory and Criticism (3) A philosophical, psychological and social theorist perspective. Analytical writing on topics such as social context and resonance of the drama, dramatic action, playwriting, dramatic illusion and Shakespeare is stressed. Prerequisite: ENGL U102 or consent of instructor.

THEA U310. Stage Makeup (3) Application of the principles of makeup for the theatre. Current theatre productions will serve as laboratory experiences. Prerequisites: ENGL U102.

THEA U370. Voice for the Actor (3) Group study of the voice in performance, using applied breath and resonance techniques aimed at enhancing vocal power for the actor or public speaker. Exercises and text work will be applied to voice techniques, creating a connection between the word image and vocal expression for the actor and public speaker. Prerequisite SPCH U201; THEA U170 or consent of instructor.

THEA U373. Fundamentals of Play Directing (3) Text analysis and interpretation. The emphasis is on discovering the intention of the playwright and on blocking, including picturization and composition, culminating in each student's production of a one-act play for public presentation. Prerequisite: THEA U170

THEA U374. Intermediate Acting (3) Advanced scene and monologue performance including script analysis

and character building. Plays of Classical Realists will be performed. Prerequisite: THEA U170.

THEA U375. Audition Techniques (3) Exploration and practice of professional audition decorum, monologue selection, preparation and performance, cold reading technique and practice, headshot and resumé development and professional unions. Each student will develop a monologue portfolio that can be performed at a moment's notice. Prerequisites: THEA U170.

THEA U376. Stage Movement for the Actor (3) Centering, body alignment and kinetic power influencing the projection of images and ideas. A studio warm-up and work-out developing the skills for the preparation of a variety of performance pieces demonstrating kinetic principles, culminating in a public performance.

THEA U377. Stagecraft (3) Drafting, design and interpretation of drawings for structural components of sets, lighting and costumes. Using the current production as a laboratory, students will concentrate on such skills as the basics of set construction, the computerized lighting system and costume construction.

THEA U378. Playwriting (3) Script analysis and preparation, dialogue development, character construction and scene composition. Students write full length manuscripts and participate in a public performance of readings from the completed plays. Prerequisite: English 102.

THEA U379. Lighting Design (3) The design and drafting process of lighting for a stage production. Designing a lighting plot and the role of lighting as a design element will be included; a research project will be assigned. Prerequisites: ENGL U102; THEA U161 or consent of instructor.

THEA U380. Scene Design (3) Design and drafting processes necessary for theatrical scenic design. Text analysis, research and the design for various play genres will be included, as well as the use of computer assisted drafting. Prerequisites: ENGL U102; THEA U377 or consent of instructor.

THEA U381. WYSIWYG Design (3) Using CAD, data, design, presentation and live modes in a 3D environment. Creating and editing designs which will allow experimentation with lighting looks and moving scenery through creative layouts, reports, pipe tapes and photo-realized renderings. Prerequisites: ENGL U102.

THEA U382. Theatre for Youth (3) Creative drama methods for youth. A children's play will be produced and performed. Prerequisites: ENGL U102; THEA U170 or consent of instructor.

THEA U384. Technical Directing (3) Technical management of all production aspects of performance including the theatrical space, rigging, emerging technology, construction from both manual and electronic drawings and renderings as well as the generation of construction drawings, interpretation and execution of lighting plots, budgeting, crew structure, time management and staff hierarchy and responsibilities. Specific problem solving, OSHA standards, and the demands of the professional technical director in commercial, academic and community theatre will be emphasized. Prerequisites: ENGL U102; THEA U170.

THEA U385. Theatre History I (3) History of theatrical production including major dramatic texts, dramatists, and dramatic theory. Included is a survey of stage and auditorium architecture, stage machinery, scenery, costuming, lighting, acting and directing from pre-history through the Italian Renaissance. Prerequisite: ENGL U102.

THEA U386. Theatre History II (3) History of theatrical production including major dramatic texts, dramatists, and dramatic theory. Included is a survey of stage and auditorium architecture, stage machinery, scenery, costume, lighting, acting and directing, from the Italian Renaissance to the modern era. Prerequisite: ENGL U102.

THEA U398. Topics in Theatre (3)

THEA U399. Internship or Independent Study in Theatre (1-3) Supervised professional experience of research outside the classroom. For three internship credit hours, a student is to work 135 hours with an approved agency; for two credit hours, 90 hours; for one credit, 45 hours. For an internship or an independent study, a contract must be signed by the student and by the instructor of record and other designated faculty and administrators. A student may repeat THEA U399 once with a different internship or independent study contract description for a total of no more than six hours of undergraduate credit. Prerequisites: GPA 2.0 overall, 2.5 in major, consent of faculty supervisor and junior standing.

THEA U400. Scenography (3) A holistic approach to theatrical design emphasizing the relationship of each design component to the finished artistic product. Exploration of the effect of the architectural space on design components and the relationship between designers and directors as they manipulate the theatrical environment and the resultant stimulation of perceptions of audiences will be investigated. Prerequisites: THEA U379 and THEA U380.

THEA U401. Classical Styles in Acting (3) Advanced study in the performance techniques and challenges particular to classical theatre. Applied scene work, focusing on the physical, vocal, and textual requirements

for the performance of Shakespeare, Moliere, and Greek classical texts, will lead to the public performance of scenes and monologues. Prerequisite: THEA U170 or consent of instructor.

THEA U402. Alternative Styles in Acting (3) Advanced modes of performance and the physiological and vocal challenges particular to acting outside the realm of realism. Exercises will focus on physical approaches to building character through the context of scene work in Absurdist, Commedia, and other non-realist texts. Prerequisite: THEA U170 or consent of instructor.

THEA U473. Advanced Play Directing (3) Choosing text, casting, directing a collaborative team and exercising complete artistic control over all aspects of theatre production. Principles of actor coaching and staging technique culminate in the public presentation of a one act play with at least an hour's running time or a select act from a full-length manuscript. Prerequisite: THEA U373.

THEA U490. Senior Seminar in Theatre (3) Reading, research and analysis on approved topics in theatre in preparation for major performance or production design projects. Products of the research might include preparation of a major acting role or the direction or design of a significant production including the documentation and articulation of the artistic process. Prerequisite: senior standing.

UNIVERSITY (UNIV)

UNIV U101. The Student in the University (3) The purposes of higher education and the potential role of an individual student within the university and other learning environments. Open to freshmen only. This course does not count toward graduation in some majors.

UNIV U102. Freshman Orientation (1) The successful transition into higher education through social, personal and academic development. Considered are topics and activities in study skills, time management, goal setting, careers, health and wellness, responsibility, cultural awareness, and the enhancement of the relationship between the faculty adviser and the student.

UNIV U103. Freshman Orientation (1) The successful transition into higher education through academic, social, and personal development. Considered are topics and activities in time management, goal setting, responsibility, and careers, with special emphasis on study skills. The academic performance of students, in all classes, is monitored throughout the semester. Required of academic skills students. (Students cannot receive credit for both UNIV U103 and U102.)

UNIV U201. Leadership Development I (2) Various approaches to the definition of leadership and practical experience in building leadership skills. The critical questions of what is leadership, what are the qualities of a good leader, and what skills does a leader need are examined. Pass/fail credit.

UNIV U202. Introduction to Leadership II (2) Practical experience in building leadership skills within the context of community-based leadership. The focus is upon the most pressing needs for leadership within the community to allow students to become directly involved with a relevant project. Prerequisite: UNIV U201.

UNIV U310. Leadership Development Internship (1-4) Practical application of leadership principles through a public service internship. Limited to participants in the Leadership Development Program. Prerequisite: UNIV U202.

UNIV U390. Peer Leadership Practicum (1-3) Application of specific guidance and teaching techniques while serving as a peer leader for University 101. Emphasis is placed on role modeling, group dynamics, creating classroom cohesion, using interactive teaching methods, and the importance of assessment. Acceptance into the peer leader program is required. Prerequisite: UNIV U101 or consent of instructor. May be repeated for additional credit for maximum of six hours.

UNIV U399. Independent Study (1-6) An individualized, contractual program of study planned in conjunction with a faculty member involved with the student's interdisciplinary program of study. May be repeated for a total of no more than six hours of undergraduate credit with consent of advisor. Prerequisites: junior standing or permission of instructor.

WOMEN'S AND GENDER STUDIES (WGST)

WGST U101. Introduction to Women's & Gender Studies (3) Gender and its intersection with other social constructs of difference (ethnicity, class, sexuality, and age). A brief overview of feminism as a social movement and a body of scholarship concerned with equality between men and women, and among women, is also presented. Topical debates address marriage, work, reproductive politics, masculinity, media culture, and other gendered issues.

WGST U301. Feminist Theory and Methods (3) Philosophical exploration of feminist theories and feminist methods of inquiry. Prerequisite: PHIL U102 or SOCY U101 or WGST U101 or permission of instructor.

WGST U355. U.S. Women's Movement (3) In-depth, interdisciplinary perspectives on U.S. women's activism,

actions and resistance strategies. Prerequisite: WGST U101 or WGST U301 or POLI U350 or permission of instructor.

WGST U369. Gender and Autobiography (3) Reading and writing first person narratives in which an author examines his or her own life as it has been shaped by social and cultural notions of masculinity and femininity.

WGST U398. Topics in Women's and Gender Studies (3) Area of study not covered in permanent offerings, to be planned around a faculty member's current research. Prerequisite: WGST U101 or consent of instructor.

WGST U399. Independent Study (1-3) An individualized program of study in the student's area of interest and in consultation with a faculty member. May be repeated for total of no more than six hours of credit. Prerequisites: WGST U101; junior or senior standing; GPA 2.0 overall, 2.5 in Women's and Gender Studies courses; a minimum of 6 hours in courses approved for the Women's and Gender Studies minor numbered 300 and above; and consent of instructor.

WGST U490. Senior Seminar (3) Exploration, at an advanced level, of issues, topics, and dilemmas related to Women's and Gender Studies. Topics vary depending upon the instructor. Prerequisites: senior standing, WGST U301 and other courses primarily addressing women's and gender issues; permission of instructor.

WGST U498. Outreach Practicum (1-3) Supervised experience outside the classroom to develop skills in program leadership. The outreach location will vary by semester. For one credit hour, a minimum of 45 hours of supervised work and periodic consultation with the instructor are required. May be repeated for total of no more than six hours of credit. Prerequisites: WGST U101; junior or senior standing; GPA 2.0 overall, 2.5 in Women's and Gender Studies courses; or consent of instructor; and successful interview with instructor.

WGST U499. Internship (1-3) Supervised professional experience or project with selected community organizations. For each credit hour a minimum of 45 hours of supervised work and periodic consultation with the instructor are required. May be repeated for total of no more than 6 hours of credit. Prerequisite: WGST U101; junior or senior standing; GPA of 2.0 overall, 2.5 in Women's and Gender Studies courses; a minimum of 6 hours in courses approved for the Women's and Gender Studies minor numbered 300 and above; and consent of instructor.

Women's and Gender Studies Courses

The following courses have been approved as Women's Studies courses. Detailed descriptions are available under departmental listings.

- ❑ ARTH U301: Women and Art
- ❑ CRJU U382: Women and Crime
- ❑ ENGL U389: Gay and Lesbian Literature
- ❑ ENGL U437: Women Writers
- ❑ POLI U350: Women and American Politics
- ❑ POLI U420: Women and Politics: A Global Perspective
- ❑ HIST U351: Women in Early Modern Europe and America
- ❑ HIST U352: Women in Modern Europe and America
- ❑ HIST U496: Topics in Women's History
- ❑ JOUR U450: Women in the Media
- ❑ PSYC U442: Psychology of Women
- ❑ SOCY U335: Sociology of Women
- ❑ SOCY U337: Gender and Society
- ❑ SOCY U339: Women and Armed Conflict
- ❑ SPCH U350: Communication and Gender
- ❑ WGST U355: U.S. Women's Movement
- ❑ WGST U369: Gender and Autobiography
- ❑ WGST U398: Topics
- ❑ WGST U399: Independent Study
- ❑ WGST U490: Senior Seminar in Women's Studies
- ❑ WGST U498: Outreach Practicum
- ❑ WGST U499: Internships

Transfer Course Equivalencies

The following courses are used for receiving appropriate level transfer credit to USC Upstate.

- ENGL U218 Introduction to Drama: An introductory course in reading and reviewing plays
- ENGL U225 Introduction to Poetry: An introductory course in the analysis of poetry
- ENGL U230 Images of Women in Literature: An introductory course of archetypes and stereotypes of women in literature
- LOGC U105 Basic Introduction to Logic: Introduction to the structure of argument, including symbolization, proof, formal fallacies, deduction and induction
- PHIL U131 Introduction to Ethics: Critical examination of normative theories of obligation and value using a variety of moral problems as units of analysis
- CRJU U215 Issues and Ideas: State and Local Politics: Introductory examination of systems and issues relating to city, county, and state government
- SOCY U102 Social Aspects of Marriage and Family: Introduction to the functions, processes, and problems of families

- SOCY U205 Introduction to Contemporary Social Issues: Introduction to selected current social issues and problems
- SOCY U206 Introduction to Social Psychology: Fundamental question about human behavior emphasizing the relationship between the individual and the group
- CRJU U210 Introduction to Juvenile Delinquency: Introduction to fundamental questions regarding the development of deviant behavior as it applies to adolescents and their treatment within the criminal justice system (same as SOCY U210)
- SOCY U235 Introduction to Death and Dying: Introduction to the social aspects of death and dying, including rites and rituals of different societies
- PHIL U121 Moral Problems in the Modern World: Discussion of contemporary moral problems and related theoretical issues, focusing on such issues as sexual morality, punishment, abortion, racism, sexism, warfare and civil disobedience