Course Descriptions

Code	Course Description
ACCT	Accountancy
ADVR	Advertising
AFAM	African and African American
ALHE	Allied Health
ANTH	Anthropology
APST	Appalachian Studies
ARTA	Art and Design
ARTH	Art History
ASTR	Astronomy
BADM	Business Administration
BASD	Applied Science
BGSD	General Studies
BIOL	Biological Sciences
BLUE	Bluegrass, Old Time, and Country Music
BNKC	Banking
BSIS	Interdisciplinary Studies
BSPS	Professional Studies
CDIS	Communicative Disorders
CHEM	Chemistry
CHIN	Chinese
CJCR	Criminal Justice and Criminology
CPSC	Cardiopulmonary Science
CSCI	Computer and Information Sciences
CUAI	Curriculum and Instruction
DANC	Dance
DHYG	Dental Hygiene
DIGM	Digital Media
DSPW	Developmental Composition
DWPM	Developmental Math
DSPR	Developmental Reading
DSPS	Developmental Study Skills
ECED	Early Childhood Education
ECON	Economics
EDFN	Foundations in Human Development and Learning
ELPA	Educational Leadership and Policy Analysis
ENGL	English
ENTC	Technology
ENVH	Environmental Health
ENVS	Environmental Studies
ETSU	Academic Affairs
FNCE	Finance
FREN	French
GEOG	Geography
GEOL	Geology
GERM	German
GREK	Greek
HDAL	Human Development and Learning
HIST	History
HSCI	Health Sciences
HUMT	Humanities
IBMS	Mathematics and Natural Sciences
IDPH	Interdisciplinary Public Health
INTD	Interior Design
INTL	International Studies
JAPN	Japanese
JOUR	Journalism
LANG	Foreign Languages
LATN	Latin
MATH	Mathematics
MCOM	Mass Communications
MEDA	Educational Media/Technology
MGMT	Management
MKTG	Marketing
MSCI	Military Science
MUSC	Music
NTFD	Nutrition and Foods
NRSE	Nursing
PEXS/PHED	Physical Education, Exercise & Sport Sciences
PHIL	Philosophy
PHYS	Physics
PHYT	Physical Therapy
PMGT	Public Management
PSCI	Political Science
PSYC	Psychology
PUBH	Public Health
PUBR	Public Relations
RADT	Radiologic Technology
READ	Reading
RELI	Religious Studies
RTVF	Radio/Television/Film
SALM	Sports and Leisure Management
SCED	Science Education
SOAA	Sociology and Anthropology
SOCI	Sociology
SOWK	Social Work
SPAN	Spanish
SPCH	Speech
SPED	Special Education
SRVL	Service Learning
STOR	Storytelling
SURV	Surveying and Mapping
THEA	Theatre
UHON	University Honors
WMST	Women's Studies
RODP	Regents Online Degree Program Courses

Accountancy
ACCT

Note: All accountancy majors and minors must earn a grade of "C" or better in each accounting course. All students enrolled in 4000-level accounting courses must have a declared major. All students enrolling in upper-division (3000-4000 level) College of Business and Technology courses must have junior or senior standing.

ACCT 2010 Principles of Accounting I (3 credits)—*Prerequisite(s): Required freshman math courses as defined by the student's major.* A study of accounting theory and procedures underlying financial statement preparation. Additional topics include accountability, financial auditing, financial statement analysis, and income tax accounting. (fall, spring, summer)

ACCT 2020 Principles of Accounting II (3 credits)—*Prerequisite(s): ACCT 2010.* (A continuation of ACCT 2010) This course is a study of management accounting including costing, cost-volume-profit analysis, budgeting, productivity analysis, capital investment decisions, planning and control, and managerial decision-making in advanced manufacturing environments. Additional topics include accounting information systems and quality control measurements. (fall, spring, summer)

ACCT 3000 Professionalism in Accountancy (3 credits)—*Prerequisite(s): A minimum grade of "C" (2.0) in ACCT 2010; junior standing.* This course emphasizes professional ethics and legal requirements of the accounting profession, report writing, impact of Securities and Exchange Commission and other regulatory agencies, career choices in accountancy, and legal and educational requirements of various professional certifications. (fall, spring)

ACCT 3010 Financial Accounting I (3 credits)—*Prerequisite(s): A minimum grade of "C" (2.0) in ACCT 2010 and ACCT 2020; junior standing.* An advanced study of financial accounting and reporting including historical development, theoretical structure, the accounting process, financial statements, revenue recognition, current asset and liability recognition, and inventory valuation. (fall, spring, summer)

ACCT 3020 Financial Accounting II (3 credits)—*Prerequisite(s): ACCT 3000 and ACCT 3010 with a minimum grade of "C" (2.0); admission to a major.* (A continuation of ACCT 3010) A study of financial accounting theory and practice for recording and reporting plant assets, financial instruments, income taxes, stockholders' equity, earnings per share, and capital maintenance theories. (fall, spring, summer)

ACCT 3090 Administrative Accounting (3 credits)—*Prerequisite(s): ACCT 2020; junior standing.* The study of accounting as it relates to administrative planning and control in the business environment. Topics addressed will include budgeting, responsibility accounting systems, financial statement analysis, and special quantitative decision techniques. NOT FOR ACCOUNTANCY MAJORS OR MINORS (fall, spring)

ACCT 3110 Management Accounting (3 credits)—**Prerequisite(s): ACCT 2020; junior standing.** A study of cost accounting emphasizing job order costing, process costing, capital budgeting, and budget control analysis. (fall, spring, summer)

ACCT 3410 Federal Income Tax Accounting (3 credits)—*Prerequisite(s): ACCT 2020; junior standing.* A study of federal income tax law with emphasis on taxation of individuals with an introduction to taxation of partnerships and corporations. (fall, summer)

ACCT 4010 Advanced Financial Accounting (3 credits)—*Prerequisite(s): ACCT 3020 and admission to a major.* A study of leases, pensions, and application of accounting theory to partnerships, branches, business combinations, consolidated financial statements, installment sales, consignments, and corporate reorganization. (fall, spring, summer)

ACCT 4018 Senior Honors Seminar (1-6 credits)—*Prerequisite(s): ECON 3088 and admission to the College of Business and Technology Honors Program.* A seminar for College of Business and Technology Honors students who are working on senior honors theses or their approved projects. Upon successful completion of the course, students will have demonstrated the ability to complete the research process by creating a written product suitable for submission to the College of Business and Technology faculty.

ACCT 4127 Cost Accounting II (3 credits)—*Prerequisite(s): ACCT 3110.* A study of cost accounting emphasizing managerial cost information for forecasting, planning, control, and behavioral factors.

ACCT 4310 Accounting Information Systems (3 credits)—*Prerequisite(s): ACCT 3020, ACCT 3110, CSCI 1100, and admission to a major.* A study of accounting information systems concepts and applications. Topics include conceptual foundation of AIS, technology of information systems, design processes and concepts, and AIS applications in several functional areas. (fall, spring, summer)

ACCT 4527/5527 Financial Statement Analysis (3 credits)—*Prerequisite(s): ACCT 2010 or ACCT 5000.* An in-depth study of the methods used to analyze balance sheets, income statements, cash flow statements, and other financial information. The types of analyses studied include ratio analysis, cross-sectional analysis, time-series analysis, and capital market analysis.

ACCT 4610 Auditing Theory and Practice (3 credits)—*Prerequisite(s): ACCT 3020, ACCT 4310, and admission to a major; Corequisite(s): ACCT 4310.* An introduction to the theory, concepts, and principles of auditing, emphasizing audit evidence, audit risk, ethical conduct and legal restrictions, professional standards, audit planning, and audit reports. (fall, spring, summer)

ACCT 4627/5627 Auditing II (3 credits)—*Prerequisite(s): ACCT 4610 or equivalent.* (A continuation of ACCT 4610) Emphasis on the uses of statistical sampling, auditing EDP systems, analytic review techniques and objectives, and methodology of operational auditing.

ACCT 4717 Not-For-Profit Accounting (3 credits)—*Prerequisite(s): Completion of ACCT 3010 and ACCT 3020 with a grade of "C" or better.* Introduces the student to governmental and other not-for-profit entity accounting, in addition to governmental entities, and voluntary health and welfare. (fall, spring, summer)

ACCT 4900 Independent Study in Accountancy (1-3 credits)—*Prerequisite(s): Departmental and college approval.* A course designed for advanced students who, under the direction of a Department of Accountancy faculty member, wish to engage in independent research or an intensive study of subjects not covered in other available courses.

ACCT 4905 Accountancy Internship (3 credits)—*Prerequisite(s): Completed at least six credit hours at the upper-division level in the student's major; junior or senior standing; and a 2.7 (minimum) GPA.* Students are selected through a competitive process for assignments in approved business or public-sector organizations as interns under the supervision of the internship coordinator and field placement supervisors. Students may not earn more than three (3) semester credits for this course, which can be used as a free elective or an elective within a business major with prior approval by the department chair.

ACCT 4957/5957 Topics in Accountancy (1-6 credits)—*Prerequisite(s): Senior or graduate standing and permission of instructor.* This course gives students an opportunity to study special problems and new developments in the field of accountancy.

Advertising
ADVR

ADVR 2070 Advertising Graphics (3 credits)—Fundamentals and practice in the creation and production of advertising communication using computer technology.

ADVR 3100 Survey of Promotion (3 credits)—Examines the roles of marketing promotion from a "risk assessment" perspective. Examines principles of effective communication and identifies key areas to consider when planning effective promotion.

ADVR 3240 Advertising Principles (3 credits)—Advertising fundamentals in relation to the media and business activities. Stress on communications aspects of advertising.

ADVR 3250 Advertising Copy and Layout (3 credits)—*Prerequisite(s): ADVR 3240 and a grade of "C" or better in ADVR 2070.* Instruction and practice in preparing advertising copy and layouts for presentation to potential customers. Ideas and their translation into persuasive words and pictures for both print and broadcast media.

ADVR 3260 Radio/TV Advertising (3 credits)—*Prerequisite(s): RTVF 2600 or ADVR 3240*. The role of the radio and television industry as an advertising medium with a study of its organization, agencies, principles, and practices in the techniques of advertising campaigns.

ADVR 3270 Advertising Media Planning (3 credits)—*Prerequisite(s): ADVR 3250 or consent of instructor*. Instruction in fundamental concepts of media-buying decisions, including media arithmetic, creative strategy, and vehicle selections.

***ADVR 3750 Advertising Campaign Management (3 credits)**—*Prerequisite(s): ADVR 3270*. Instruction in planning and implementing the complete advertising campaign. Stresses managerial practices of setting objectives, creative and media strategies, budgeting, measuring effectiveness, and dealing with agencies.

NOTE: Students cannot receive credit for both ADVR 3750 and MKTG 3750.

ADVR 4018 Honors Thesis (3 - 6 credits)—Open to those in university honors programs only. A capstone experience serving as the culmination of an honors curriculum.

ADVR 4080 Advertising Internship (3 credits)—*Prerequisite(s): Permission of instructor*. Supervised professional experience in advertising.

ADVR 4101 Topics in Advertising (1-6 credits)

ADVR 4250 Advertising Agency Management (3 credits)—*Prerequisite(s): ADVR 3270*. Instruction in the decision-making processes of advertising agency managers. Current social, legal and ethical issues, advertising agency relations, and agency management. Students will generate alternatives and develop solutions using case study methods.

ADVR 4730 Advertising Practices (3 credits)—*Prerequisites: ADVR 3250 and ADVR 3270*. Applies advertising principles and techniques to business and industry, government, health care facilities, institutions and organizations, trades and professions. Emphasizes case studies and advertising projects.

ADVR 4900/5900 Independent Study—Advertising (1-3 credits)

** Cross-listed with MKTG 3750*

African and African American
AFAM

***AFAM 3989 Internship/Cooperative Education (1-3 credits)**—*Prerequisite(s): Permission of program adviso*r. Planned and supervised employment related to African/African American Studies.

***AFAM 3999 Internship/Cooperative Education (1-3 credits)**—*Prerequisite(s): Permission of program advisor*. An extension of a planned and supervised employment related to African/African American Studies.

****AFAM 4900 Special Studies (3 credits)**—*Prerequisite(s): Permission of program advisor*. Designed to afford opportunities for study not provided for in regular course offerings for undergraduates.

AFAM 4950 Senior Seminar (3 credits)—*Prerequisite(s): SOAA 3110 and 12 credit hours completed in African and African American Studies*. An integrated interdisciplinary study of a selected topic in African and African American Studies. Requires a student research study.

** May not be repeated for credit.*
*** May provide credit for an approved travel-study program or an approved program of independent study.*

Allied Health
ALHE

ALHE 1100 Professional Field Cognate I (1-15 credits)

ALHE 2010 Introduction to Allied Health (2credits)—A course familiarizing the student with the many facets of allied health professions including types of health care professionals, medical ethics, terminology, safety, infection control, and microbiology.

ALHE 2020 Patient Care and Assessment (3 credits)—*Prerequisite(s): Current CPR certification*. This course emphasizes medical techniques and nursing procedures required during medical procedures for allied health majors. Assessment of vital signs, pharmacology, venipuncture, legal implications, and patient and physician rights will be introduced. Agency protocol for the various disciplines will be presented.

ALHE 2100 Professional Field Cognate II (1-15 credits)

ALHE 3010 Allied Health Professionals (3 credits)—The purpose of this course is to serve as a transition course for the student in pursuit of a baccalaureate degree in Allied Health. Theories and concepts of professional allied health practitioners are explored in relationship to their roles in the health care system. The course includes content about practice and expectations of a baccalaureate degree allied health practitioner in a multi-cultural society.

ALHE 4030 Professional Issues in Allied Health (3 credits)—A study of current and emerging issues vital to allied health professionals including licensing and continuing education needs of Allied Health professionals, models of inter-professional collaboration, evidence-based practices, and theories of ethical practice.

ALHE 4060 Research in Allied Health (3 credits)—This course is intended to enhance the allied health practitioner's skills in the development and interpretation of research. Discussions on various research designs, statistical procedures, sampling techniques, and literature reviews. Assignments inclusive of advanced writing applications and technology utilization will be required.

ALHE 4070 Leadership in Allied Health (3 credits)—This course provides a historical prospective of leadership theory. Various models will be discussed to allow the students to develop their personal leadership style. An analysis of trends in motivational studies, conflict resolution, and organizational change will be conducted. Professional specific knowledge will be reviewed to assure students transition into the health care system. Basic issues concerning human resource management will be included.

ALHE 4100 Information Management for Allied Health Professionals (3 credits)—Introduction to the evolution and management of and strategic planning for Allied Health Information systems. The focus is the integration of Allied Health Information systems with enterprise-wide systems.

ALHE 4125 Rural Health Research and Practice (3 credits)—Allied health and students from other disciplines work in interprofessional teams to develop a community-based health proposal in collaboration with their rural community partners. Registration requires permission of Instructor.

ALHE 4135 Rural Health Program Planning (3 credits)—*Prerequisite: ALHE 4125 or permission of the instructor*. Focuses on the planning, implementation, and evaluation of specific health programs and services to meet community-identified neeeds.

ALHE 4900 Independent Study (1-6 credits) Individual or group projects done with permission of and under supervision of faculty. A detailed research paper is required.

Anthropology
ANTH

ANTH 1240 Introduction to Cultural Anthropology (3 credits)—A comprehensive examination of the human experience. Major topics include the relationship between biology and culture; cultural diversity; and the cultural evolution of communication, kinship, religion, art, political organization, and foodways.

ANTH 1260 Introduction to Archaeology (3 credits)—Examination of archaeological field techniques, laboratory methods, and requisite federal and state laws. The archaeology of world prehistory is surveyed from the beginnings of the human lineage and the rise of anatomically modern humans through the development of fully agricultural societies.

ANTH 1280 Introduction to Physical Anthropology (3 credits)—An examination of the evolution of humankind focusing on genetic, paleontological, and primatological evidence. Human biological variation is also considered with respect to the dynamics of evolution and the interaction between biology and culture.

ANTH 2040 Folk Culture in the Modern World (3 credits)—An introduction to the major theories, concerns, and methods of modern folklore scholarship with strong emphasis upon field studies of family and

regional traditions and the practical applications of folklore research in cultural outreach and public educational programs.

ANTH/BLUE 2150 American Folk Music (3 credits)—A multicultural survey of America's diverse ethnic and regional traditions of folk music, how they have been revived and popularized in the twentieth century, and their contributions to contemporary popular culture around the world.

ANTH 3028 Honors Cultural Anthropology (3 credits)—Open to those in the Honors Scholars Program only. An introduction to ethnography and the world of cultural diversity as well as to ethnographic research methods.

ANTH 3070 Medical Anthropology (3 credits)—An introduction to the crosscultural, holistic, and evolutionary study of illness and health. Major topical areas include ethnomedical belief systems, the interaction of biology and culture, and culture as an adaptive mechanism.

ANTH 3080 Nutritional Anthropology (3 credits)—This course examines the biological and social forces that shape human food use and the nutritional status of individuals from an evolutionary and cross-cultural perspective.

ANTH 3250 Environmental Anthropology (3 credits)—Study of the political economy and cultural ecology of global development policies and their social and material impacts for peoples of the world. Special focus will be given to indigenous populations whose lifeways and worldviews are most compromised.

ANTH 3260 Visual Anthropology (3 credits)—An exploration of the impact that technological advances in capturing images on film has made in the field of anthropology. Enthographic films and associated literature will be investigated.

ANTH 3400 Human Osteology and Paleontology (3 credits)—An intensive survey of the human skeleton, including differences by sex, age, and ethnicity. Study of the evolutionary history of humankind from early hominids to anatomically modern humans.

ANTH 3500 Appalachian Folk Medicine (3 credits)—The study of folk medical beliefs and practices, focusing on Southern Appalachia from the late 1800s to 1940. Topics examined include folk materia medica and therapeutics, magico-religious beliefs and practices, folk healers, folk concepts of illness and human physiology.

ANTH 3903 Prehistory of Southern Appalachia (3 credits)—*Prerequisite or Corequisite: ANTH 1260.* An archaeological survey of 12,000 years of Native American prehistory in Southern Appalachia with particular focus on highland regions. Students gain exposure to prehistoric archaeology, current research, and analytical methods. Important aspects of material culture and infrastructure are highlighted.

ANTH 4007/5007 Archaeology of the Southeastern United States (3 credits)—Intensive survey of the prehistory of the Southeastern United States. Course covers the span of time from the peopling of the New World, some 13,000+ years ago, up through European contact.

ANTH 4017/5017 Historic Native American Cultures of the Southeastern U.S. (3 credits)—An archaeological survey of the historically known Native American tribes of the Southeastern U.S. Study of native lifeways and the effects of European influence and colonization efforts on aboriginal societies.

ANTH 4018 Honors Thesis (1-6 credits) — Repeatable up to a total of 6 hours. Open only to students in Anthopology. Directed research in an approved topic. Required for departmental honors.

ANTH 4037/5037 Old World Archaeology (3 credits)—*Prerequisite: SOAA 1260.* An intensive survey of the prehistory of Africa, Asia, and Europe from the Palaeolithic Era (including human origins and early hunter gatherer adaptations) through the Iron Age (including the transition to domestication and agriculture as well as the rise of complex societies).

ANTH 4070 Practicing Anthropology (3 credits)—*Prerequisite: ANTH 1240.* This course focuses on the practice of anthropology in real-world settings, including medicine, education, international and community development and business. The course focuses on tools and skills for practicing anthropology as well as establishing a career as an applied anthropologist.

ANTH 4240 Primatology (3 credits) — *Prerequisites: ANTH 1240, 1260, and 1280.* A survey of the study of nonhuman primates, especially the apes. Topics include the evolution of primates, morphology, ecology, social organization, sexual behavior, tool use, play, communication, and protoculture.

ANTH 4250 Ethnomedicine (3 credits)—A cross-cultural and historical examination of medical belief systems, focusing in particular on the context of medical pluralism and culturally competent health care delivery. Medical belief systems examined include Latin American folk medicine, Native American medicine, Chinese traditional medicine, Ayurvedic medicine, Euro-American folk medicine, and biomedicine.

ANTH 4400 Archaeological Field School (3-6 credits) — Field work intensive course designed to introduce students to archaeological excavation methods. Students will learn to map, recover, catalog, and process archaeological artifacts. The significance and context of archaeological investigations will be addressed.

ANTH 4567/5567 Scottish Ethnology (3 credits)—*Prerequisites: ANTH 1240 or APST 2010.* A survey of Scottish ethnic and regional groups and their folk traditions. Topics covered include life history, material culture, subsistence patterns, folk narrative, and beliefs and customs.

ANTH 4630 Native American Culture in Contemporary Society (3 credits)—An introduction to Native American populations of the United States. Classical anthropological study of indigenous mythologies and pre-contact traditions will be addressed, as well as contemporary issues of poverty, health, public policy, and pan-Indianism.

ANTH 4830 Anthropological Theory (4 credits) — *Prerequisites: ANTH 1240, 1260, and 1280.* An examination of the historical development of anthropological theory from the late nineteenth century to the present.

ANTH 4957/5957 Special Topic in Anthropology (1-6 credits)

Appalachian Studies
APST

APST 2060 Introduction to Appalachian Studies (3 credits)—An introduction to the study of the Appalachian region, focusing on the idea of Appalachia in American and world consciousness and its treatment in the social sciences, media, literature, and the arts. Required for Appalachian Studies minor.

APST/HIST 3510 Coal Mining in Appalachia: History and Current Issues (3 credits)—Explores the history of coal mining in Appalachia from cultural, socioeconomic, and environmental perspectives.

APST 3530 Religion in Appalachia (3 credits)—This course will survey the diversity of religions in Appalachia both historically and currently.

APST 4177/5177 Art and Appalachia (3 credits)—*Prerequisites: ARTH 2010 or 2020 or APST 2060 or permission of the instructor.* A survey of major styles and trends in the arts created in, for, and about the Appalachian region from the late 18th century to contemporary times.

APST 4237/5237 Scots-Irish in Appalachia (3-6 credits)— This course will examine the contribution of the Scots-Irish and Scots to Appalachian culture.

APST /ENGL 4337/5337 Appalachia in Scotland (3-6 credits)—This course will survey the relationship among Appalachian, Scottish, and Irish cultures, with an emphasis on Scotland and Ireland.

APST/SOAA 4567/5567 Scottish Ethnology (3 credits)—A survey of Scottish ethnic and regional groups and their folk traditions. Topics covered include life history, material culture, subsistence patterns, folk narrative, and beliefs and customs.

APST 4900/5900 Independent Study (1-3 credits)—The Independent Study option is designed for individual students who wish to pursue topics not covered elsewhere in the curriculum. Students work independently under the supervision of a faculty member who creates the course of study in consultation with the department chair.

APST/SOAA 4907/5907 Appalachian Foodways (3 credits)—Traditional and developing food cultures of the Mountain South. Topics include: the historical roots of Appalachian cookery; food and class in Appalachia; Native American and African influences on mountain cuisine; immigrant cooking in the mountains; the rituals of the mountain table; the products of the land and larder; traditional food preservation techniques and beliefs; and the emergence and viability of sustainable agriculture and aquaculture.

APST 4957/5957 Special Topics in Appalachian Studies (1-3 credits) — The Special Topics course is designed for special interest subjects that are not covered elsewhere in the curriculum. May be repeated when the topic changes.

APST 4997/5997 Current Issues in Appalachian Studies (3 credits)—Seminar surveying major issues and concerns in Appalachian Studies since the 1970's. Required for Appalachian Studies minor.

Art and Design Studio
ARTA

ARTA 1110 2-D Design (3 credits)—A fundamental exploration of the elements of two-dimensional art (line, shape, texture, value, and color) and their relationship to the principles of design (balance, rhythm, variety, and unity). Stress is placed on visual thinking through the use of problem-solving structures.

ARTA 1140 3-D Design (3 credits)—An examination of three-dimensional forms in order to gain a spatial understanding of the elements and principles as applied in design. An exploration in the media, processes, and applications of three-dimensional concepts.

ARTA 1201 Drawing Fundamentals (3 credits)—An introductory drawing course based primarily on direct observation techniques, analysis, basic pictorial composition, and spatial organization. An exploration of a variety of subject matter, media, processes, and attitudes as related to drawing and the visual arts.

ARTA 1204 Color Theory (3 credits)—*Prerequisite(s): ARTA 1110 or ARTA 1201; or permission of instructor.* An introduction to the basic principles of color theory as related to the visual arts to include both additive and subtractive color systems. An exploration of a variety of media and processes which stresses the use of a problem-solving structure.

ARTA 2012 Intermediate Drawing (3 credits)—*Prerequisite(s): ARTA 1110, ARTA 1140, ARTA 1201, ARTA 1204, or permission of the instructor.* A course based on the observation of various subject matters and their representation through various drawing materials. Emphasis on colored drawing and more complex pictorial and spatial problems. Nonobjective and abstract problems will be included. Development of individual responses will be encouraged.

ARTA 2051 Foundations in Painting (3 credits)—*Prerequisite(s): ARTA 1110, ARTA 1140, ARTA 1201, or permission of instructor*. An introductory course with an emphasis on a variety of materials, techniques, and approaches.

ARTA 2071 Beginning Weaving (3 credits)—An introduction to floor-loom weaving through the study of basic two and four harness weaves, fiber types, and color relationships. Emphasis on the development of technical skills, color, and design.

ARTA 2081 Beginning Jewelry Design and Metalsmithing (3 credits)—*Prerequisite(s): ARTA 1140.* Basic techniques and concepts of jewelry design and construction.

ARTA 2091 Introduction to Ceramics (3 credits) —This introductory course explores the nature of clay and its unique possibilities for artistic expression through hand building projects and a variety of firing methods. Ceramic history is emphasized and basic technical information is covered.

ARTA 2120 Basic Figure Drawing (3 credits)—*Prerequisite(s): ARTA 1110, ARTA 1201, ARTA 1204, or permission of instructor.* An introductory course in drawing in human figure to emphasize observation, proportion, and a more intuitive approach to human anatomy. Students will work directly from the skeleton and models to analyze the figure and explore a variety of media and pictorial problems.

ARTA 2128 Artistic Experience II (3 credits)—*Prerequisite: THEA 2118*. This course covers the variety of critical thinking that can be utilized in the appreciation of many different types of the arts. An emphasis is placed on challenging the notion that art is unrelated to other disciplines. May involve historical, analytic, or creative activity. Open only to students in the Honors Scholars Program.

ARTA 2200 Basic Photography (3 credits)—Introductory course in black and white photography. The course will cover basic photographic techniques and darkroom procedures from the taking of the picture to the finished print. Each student should have a camera that can be used in the course.

ARTA 2210 Introductory Printmaking (3 credits)—*Prerequisite(s): ARTA 1110, ARTA 1201, and ARTA 1204*. An introduction to basic intaglio and relief processes, including line etch, aquatint, linocut, dry point, color registration, editioning, small press operation, use of hand tools, use of grounds, general shop procedure, and aesthetic development.

ARTA 2401 Commercial Art/Graphic Design I (3 credits)—*Prerequisite(s): ARTA 1110, ARTA 1140, or permission of instructor.* An introductory studio course in the design and reproduction of commercial art and visual communications.

ARTA 2501 Introduction to Sculpture (3 credits)—*Prerequisite(s): ARTA 1140.* An introduction to sculptural techniques and concepts, including figure study, abstraction, work with clay, wood, plaster, mixed media, and site specific sculpture. Slide lectures covering historical and contemporary approaches to sculpture will be an ongoing component.

ARTA 2916 Works in Progress Review (0 credit)—*Prerequisite(s): Completion of 35 credit hours in art.* Students pursuing the BFA degree (Bachelor of Fine Arts) must complete a portfolio review prior to acceptance in the BFA program and completion of the degree requirements. Review of portfolio work will be completed by a committee of faculty members from within the department. Date and time for the individual review will be announced each semester. Students must complete the review after accumulating 36 art credits and before accumulating 45 art credits.

ARTA 2957 Topics in Art (1-6 credits)

ARTA 2989 Internship/Cooperative Education (1-3 credits)

ARTA 3010 Advanced Drawing (3 credits)—*Prerequisite(s): ARTA 2012, ARTA 2120, or permission of instructor.* A visual investigation of advanced concepts in drawing with further exploration of traditional and nontraditional subject matter and materials. Students will work toward thematic development through small series and will be encouraged to develop personal iconography.

ARTA 3071 Intermediate Weaving II (3 credits)—*Prerequisite(s): ARTA 2071 or by permission of instructor.* A study of intermediate multi-harness weaving techniques to include complex pattern weaves, twills, and doubleweave. Focus on functional or fine art application while emphasizing technical skill and craftsmanship, experimentation, color, and design.

ARTA 3072 Intermediate Weaving III (3 credits)—*Prerequisite(s): ARTA 2071 and ARTA 3071; or by permission of the instructor.* This course explores the image-making potential of the woven textile including inlay, tapestry, and brocade. Painted and ikat-dyed advanced considerations of color, design, construction, and finishing techniques.

ARTA 3073 Fiber Construction (3 credits)—Off-loom textile processes explore three-dimensional form in fiber using traditional and non-conventional materials. Emphasis on the development of technical skills, form, and concept.

ARTA 3081, 3082 Intermediate Jewelry Design and Metalsmithing (3 credits)—*Prerequisite(s): ARTA 1140 and ARTA 2081.* Intermediate techniques including fabrication, stone setting, casting, forging, raising, and jewelry design. May be repeated for credit one time.

ARTA 3091 Beginning Throwing (3 credits)—This is a beginning course in ceramics. It concentrates on the potter's wheel as a major tool. It deals with the vessel in traditional and nontraditional format.

ARTA 3092 Intermediate Ceramics (3 credits)—*Prerequisite(s): ARTA 3091*. An intermediate course in ceramics. Forming techniques will be used in combination. There will be lectures on clays, glazes, and firing techniques.

ARTA 3110 Intermediate Painting (3 credits)—*Prerequisite(s): ARTA 2051 or permission of the instructor*. A course that concentrates on building color relationships and visual clarity.

ARTA 3120 Life Painting (3 credits)—*Prerequisite(s): ARTA 2051, ARTA 3110, or permission of instructor*. An oil painting course with an emphasis on selecting subject matter, painting from nature, still life, and the figure.

ARTA 3130 Watercolor Painting (3 credits)—Broad range of problems and techniques.

ARTA 3147 Advanced Watercolor Painting (3 credits)—Advanced projects in watercolor.

ARTA 3201 Intermediate Figure Drawing (3 credits)—*Prerequisite(s): ARTA 2120 or permission of the instructor*. An additional exploration of the figure and its expressive potential with advanced analysis of human anatomy including musculature and surface features. Ink and color drawing will be emphasized along with expanded problem solving.

ARTA 3211 Lithography (3 credits repeatable)—*Prerequisite(s): ARTA 1110, ARTA 1140, ARTA 1201*. A creative exploration of basic plate and stone lithography, utilizing crayon and tusche materials, etching techniques, stone graining, small press operation registration, and editioning.

ARTA 3221 Screen Process (3 credits repeatable)—*Prerequisite(s): ARTA 1110, ARTA 1201, and ARTA 1204*. A creative exploration of serigraphy, use of screen construction, photo stencil and other stencil methods, color theory review, multiple registration, editioning, with optional digital output applications.

ARTA 3301 Intaglio (3 credits repeatable)—*Prerequisite(s): ARTA 2210*. A continuation of the intaglio processes learned in ARTA 2210, students may choose from a variety of plate processes, including line etching, photo plates, plate engraving, marbling and experimental processes.

ARTA 3341 Relief Printmaking (3 credits repeatable)—*Prerequisite: ARTA 2210*. A continuation of relief printmaking, with options of linocut, woodcut, or wood engraving, using additive and reductive processes, black and white and color printing, registration of multiple blocks, with options to explore monoprint.

ARTA 3380 Color, Fiber, and Dye (3 credits)—*Prerequisite(s): ARTA 1204*. An investigation of dye color applications to fiber and fabric using chemical dyes with cellulose, protein and synthetic fibers. Emphasis on the development of technical skills and color. Course repeatable for credit.

ARTA 3401 Typography (3 credits)— A studio course in typography for graphic design. Design projects explore type form and content relationships. Projects emphasize type design, page layout, and font manipulation to bring visual resonance to a written message. The course explores creative uses of type with graphic design software.

ARTA 3402 Commercial Art (3 credits)—*Prerequisite(s): ARTA 2401 and ARTA 3401*. A studio course devoted to the design and preparation of two-dimensional materials for commercial reproduction.

ARTA 3501 Intermediate Sculpture (3 repeatable)—*Prerequisite(s): ARTA 2501*. Continued development of sculptural techniques and concepts, including metal fabrication and casting, stone carving, and work of the student's choice. Students will complete several projects.

ARTA 3502 Intermediate Sculpture (3 repeatable)—*Prerequisite(s): ARTA 2501*. Continued development of sculptural techniques and concepts. Students will complete several projects.

ARTA 3601 Intermediate Photography (3-9 repeatable)—*Prerequisite(s): ARTA 2200 or permission of instructor*. Projects in black and white photography above the basic level, concerning natural lighting, darkroom, composition, camera and lens, processing, and special effects. The emphasis is on visual communication.

ARTA 3602 Color Photography (3 repeatable)—*Prerequisite(s): ARTA 2200 or permission of the instructor*. Projects in color transparency and color print materials concerning learning the technical and aesthetic aspects of the photographic color medium. Students will do all their own processing with total control as the goal.

ARTA 3603 Alternate Photographic Processes (3 repeatable)—*Prerequisite(s): ARTA 2200 or permission of instructor*. Emphasis on the design elements in photography. Experience in high contrast materials, solarization, and print manipulation, as well as non-silver materials. Emphasis on exploration of the creative possibilities of the medium.

ARTA 3989 Internship/Cooperative Education (1-3 credits)

ARTA 4002 Graphic Design (3 repeatable)—*Prerequisite(s): ARTA 2401*. The Graphic Design Workshop: Students work with clients on actual graphic design assignments receiving practical experience in account management and production to provide a foundation for professional practice.

ARTA 4018 Honors Thesis (3-6 credits)—Open to those in university honors programs only. A capstone experience serving as the culmination of an honors curriculum.

ARTA 4071 Advanced Fibers I (3 repeatable)—*Prerequisite(s): ARTA 2071, ARTA 3071 and ARTA 3072; or by permission of the instructor*. Students work independently while developing an individual direction. Technical, aesthetic, and conceptual input will be structured toward individual needs. Professional practices within the independent studio or for industry will be addressed.

ARTA 4072 Advanced Fibers II (3 repeatable)—*Prerequisite(s): ARTA 2071, ARTA 3071, ARTA 3072, and ARTA 4071; or by permission of instructor*. Continuation of ARTA 4071

ARTA 4073 Fabric Design (3 repeatable)—*Prerequisite(s): ARTA 1204*. An introduction to applied textile design. Hand-printed and dyeing techniques include stamping, block-printing, tie-dye/shibori discharge, and other techniques to develop imagery and color/pattern relationships on fabric.

ARTA 4081, 4082 Jewelry and Metalsmithing (3 credits)—Advanced courses in metal techniques and jewelry design.

ARTA 4107/5107 Art Study Tour (1-3 credits, variable)—This course is designed to acquaint the student with original works of art. The lecture series is followed by a trip to selected museums in the United States and/or Europe.

ARTA 4110 Combined Media Painting (3 credits)—*Prerequisite(s): ARTA 2051, ARTA 3110, ARTA 3120, or permission of the instructor*. Painterly approaches to alternative methods and techniques in image-making. A focus on concept, visual communication, and craftsmanship. (Course Repeatable for Credit.)

ARTA 4117/5117 Italy: Art, Culture, Studio: Ceramics (3 credits)—This studio course in Tuscany, Italy will include field trips exploring the region's wealth of art, history, and architecture. The resulting cultural experience will inform the work done in the studio.

ARTA 4120 Figure Painting (3 credits)—*Prerequisite(s): ARTA 2051, ARTA 3110, ARTA 3120, ARTA 2120 or permission of the instructor*. A studio course in oil painting utilizing traditional, as well as contemporary, approaches to the human figure. (Course Repeatable for Credit.)

ARTA 4201 Advanced Figure Drawing (3 repeatable)—*Prerequisite(s): ARTA 2120 and ARTA 3201; or permission of the instructor*. An advanced course in the study of the human form. Emphasis is placed on individual expressive content using the figure as a point of departure.

ARTA 4202 Mixed Media Drawing (3 repeatable)—*Prerequisite(s): ARTA 2012 or ARTA 2120; and ARTA 3010; or permission of the instructor*. A focus on alternative drawing methods and formats emphasizing combined media. Advanced studies in content and visual communication with special emphasis on contemporary drawing directions.

ARTA 4211 Advanced Lithography (3 credits repeatable) — *Prerequisite(s): ARTA 2210, ARTA 3211*. A continuation of ARTA 3211, with options to explore color printing, and experimental lithographic processes.

ARTA 4217/5217 Book Arts (3 credits)—A course exploring adhesive and nonadhesive book formats. Emphasis is placed on a book as a complete format of cover, text, and image. Paper decoration, books as sculptural objects, and time-based directions will be addressed.

ARTA 4221 Advanced Screen Process (3 credits repeatable)—*Prerequisites: ARTA 3221.* This course is a continuation of the concepts learned in ARTA 3221. Emphasis is placed on developing personal themes and independent exploration in screen process.

ARTA 4271 Advanced Ceramics I (3 credits)—*Prerequisite(s): ARTA 2091, ARTA 3091, ARTA 3092.* Advanced class which will allow students to work on special problems and techniques on an individual basis. It will also include lectures on clay, glazes, and firing techniques.

ARTA 4272 Advanced Ceramics II (3 credits repeatable)—*Prerequisite(s): ARTA 2091, ARTA 3091, ARTA 3092, and ARTA 4271.* (A continuation of ARTA 4271) Emphasizing individual direction, expression, and work at an advanced level.

ARTA 4273 Technical Ceramics (3-9 repeatable)—*Prerequisite(s): ARTA 2091 and, ARTA 3091.* This course deals with the technical considerations of ceramics: clay, glazes, firing techniques, kilns, raw materials, testings, and special firings. It will be a lecture format course with lab work.

ARTA 4301 Displays and Package Design (3 credits)—*Prerequisite(s): ARTA 3401, ARTA 3402, or permission of instructor.* An advanced studio course in the design, construction, and aesthetics of product packaging and three-dimensional visual displays. Projects in this course will emphasize graphic design concepts and processes to create visual identity and branding for containers and promotional structures.

ARTA 4302 Illustration (3 repeatable)— *Prerequisite(s): ARTA 2401 or permission of instructor.* An advanced studio course in contemporary illustration techniques for solving visual communication design problems. Projects develop conceptual thinking, drawing, and illustration software skills.

ARTA 4303 Computer Art and Design (3 repeatable)—*Prerequisite(s): ARTA 2401, ARTA 3401, ARTA 3402, or permission of the instructor.* An advanced studio course which focuses on the computer as a creative tool for visual communication problem-solving. Course emphasizes computer methods for solving graphic design problems and the development of computer skills in creating art, design, and illustration.

ARTA 4330 Elementary School Art (2-3 credits)—Required course for all elementary education majors. Should be taken in the junior year. ARTA 4330 is required of all students desiring certification in art. The courses include art media experiences and art appreciation.

ARTA 4341 Advanced Relief (3 repeatable)—*Prerequisite: ARTA 3341.* Advanced study of linocut, woodcut, or wood engraving, with emphasis placed on concept and color theory. Repeatable.

ARTA 4401 Advanced Intaglio (3 repeatable)—*Prerequisite(s): ARTA 2210, ARTA 3301.* A continuation of ARTA 3301, with advanced work in plate etching, experimental grounds, mixed processes, and optional innovative processes not covered in other printmaking courses.

ARTA 4419 Teaching Art in Secondary Schools (3 credits)—A study of the aims, philosophy, and curricula of the secondary school art program based on an examination of available literature. Required for certification in art. No course substitutions. This course counts as education credit and cannot be used to meet the art course requirement for a minor or major in art. At the beginning of the course the student will submit a portfolio of his/her art works to the art education faculty for review.

ARTA 4501 Advanced Sculpture (3 repeatable)—*Prerequisite(s): ARTA 3501 or ARTA 3502.* Students develop work on an individual basis, working on specific problems and processes developed in consultation with the instructor. Both creative thinking and technical skills will be emphasized.

ARTA 4502 Advanced Sculpture (3 repeatable)—*Prerequisite(s): ARTA 3501 or ARTA 3502.* Continued advanced work in sculpture, emphasizing personal direction and self-motivation in sculpture, both technically and conceptually.

ARTA 4517/5517 Comic Book Illustration (3 credits)—*Prerequisite(s): ARTA 1201, ARTA 1110.* Study of major aspects of comic book creation, from inception, illustration, to final production. Prerequisites may be waived by permission of instructor. This course is repeatable. Graduate students who repeat the course must complete different research papers for each semester.

ARTA 4602 View Camera Photography (3 repeatable)—*Prerequisite(s): ARTA 3601 or permission of instructor.* An advanced course using 4 x 5 or 8 x 10 view cameras, furnished to students enrolling in this course for its duration, concerning techniques, the zone system, and development of professional quality.

ARTA 4603 Introduction to Studio Photography (3 repeatable)—*Prerequisite(s): ARTA 2200, ARTA 3601, or permission of instructor.* Basic studio lighting techniques. Projects concerning portrait, fashion, and product lighting. Work toward professional quality.

ARTA 4901 Independent Study in Sculpture (1-6 repeatable)—*Prerequisite(s): ARTA 3502.* Study in a selected area of art history for in-depth research, with permission of instructor.

ARTA 4912 Independent Studies in Photography (1-6 credits repeatable)

ARTA 4915 Independent Studies in Weaving (1-6 credits repeatable)

ARTA 4916 Portfolio and Exhibit (1-3 credits variable)—*Prerequisite(s): ARTA 2916.* The B.F.A. student takes this course in the last semester before graduation. The course is designed to allow the student to prepare a portfolio for the job market and to prepare work for the final required undergraduate B.F.A. exhibition in the department gallery. Students will take this course with a professor in the area of concentration, and provide the Art Department with slides of their exhibition materials.

ARTA 4957/5957 Special Topics in Art (1-6 credits)

ARTA 4989 Internship/Cooperative Education (1-3 credits)

Art History
ARTH

ARTH 2010 Art History Survey I (3 credits)—A survey of architecture, painting, sculpture, and the minor arts in the Western world from prehistoric times to the end of the Middle Ages.

ARTH 2020 Art History Survey II (3 credits)—A survey of architecture, sculpture, and painting in the Western world from the Italian Renaissance to the present.

ARTH 3403 History of Graphic Design (3 credits)—A survey of visual communication/graphic design from prehistory through current graphic design methods, styles, and industry-leading designers.

ARTH 4007/5007 Renaissance Art in Northern Europe (6 credits)— *Prerequisites: ARTH 2020 or permission of the instructor.* European art outside Italy in the fifteenth and sixteenth centuries with emphasis on the art of the Low Lands and Germany.

ARTH 4017/5017 Classical Art (3 credits)—A survey of the arts of Greece and Rome. Offered in alternate years.

ARTH 4018 Honors Thesis (3-6 credits)—Open to those in university honors programs only. A capstone experience serving as the culmination of an honors curriculum.

ARTH 4027/5027 Medieval Art (3 credits)—A survey of European architecture, sculpture, and painting from Late Antiquity to the end of the Gothic period.

ARTH 4037/5037 Italian Renaissance Art (3 credits)—*Prerequisite: ARTH 2020.* Art in Italy from the fourteenth to sixteenth century.

ARTH 4047/5047 Baroque Art (3 credits)—A survey of the major styles of European art from 1600 to 1750: Baroque, Classicism, Realism, and Rococo. Offered in alternate years.

ARTH 4057/5057 19th Century Art (3 credits)—A survey of the major styles and trends in art from Neoclassicism to Postimpressionism. Offered in alternate years.

ARTH 4067/5067 Modern Art (3 credits)—Major developments in painting and sculpture and other art forms from Postimpressionism through Surrealism. Offered every fall semester.

ARTH 4077/5077 Contemporary Art (3 credits)—A survey of art from Surrealism to the present day. Offered every spring semester.

ARTH 4087/5087 Asian Art (3 credits)—A study of the arts of India, China, and Japan.

ARTH 4107/5107 Art Study Tour (1-3 credits, variable)—This course is designed to acquaint the student with original works of art. The lecture series is followed by a trip to selected museums in the United States and/or Europe.

ARTH 4117/5117 Women Artists and Their Art (3 credits) — *Prerequisites: ARTA or ARTH 2020, WMST 2010, or permission of the instructor.* This course examines the contributions of women artists throughout history and addresses the question of why women's art has been ignored or denigrated in the study and criticism of art. It also considers how women overcame social, educational, and legal obstacles to become professional artists.

ARTH 4127/5127 History of Architecture (3 credits) — *Prerequisites: ARTH 2010 and ARTH 2020 or permission of instructor.* A detailed and critical survey of the history of architecture, from pre-history to the present day, including both western and non-western architecture.

ARTH 4167/5167 Aesthetic Theory and Criticism (3 credits repeatable)—A discussion of contemporary aesthetic theories as they relate to the practices of art criticism and art history, with an emphasis on contemporary continental and analytic developments in art theory and historiography.

ARTH 4177/5177 Art and Appalachia (3 credits)—*Prerequisites: ARTH 2010 or 2020 or APST 2060 or permission of the instructor.* A survey of major styles and trends in the arts created in, for, and about the Appalachian region from the late 18th century to contemporary times.

ARTH 4601 History of Photography (3 credits)—Exploring the history of photography from its beginning to the present day.

ARTH 4901 Independent Study in Sculpture (1-6 repeatable)—*Prerequisite(s): ARTA 3502.*Study in a selected area of art history for in-depth research, with permission of instructor.

ARTH 4907/5907 Art History Seminar (3 credits) — *Prerequisites: ARTH 2010, ARTH 2020, ARTH 4000-level or permission of instructor.* An investigation of specific themes or topics in the history of art, including analysis, discussion, and interpretation of works of art and scholarly literature. May be repeated for credit when topic changes.

ARTH 4957/5957 Special Topics in Art (1-6 credits)

Astronomy

ASTR

ASTR 1010 Astronomy I (4 credits)—An introductory course which includes historical astronomy, celestial motions, properties and observation of light, and physical characteristics of the solar system and the sun. Includes laboratory activities involving telescope observations of solar system and stellar objects. Designed for students desiring a laboratory science for its general education value. Three (3) hours of lecture, and one (2) two hour lab each week.

ASTR 1020 Astronomy II (4 credits)—Introduces students to the study of stars, galaxies, and the universe as a whole. Includes laboratory activities involving telescope observations of star systems, nebulae, and galaxies. Three (3) hours of lecture, and one (2) two hour lab each week.

ASTR 1035 Life in the Universe (4 credits)—Explores the possibility of life elsewhere in the Universe, including the origin and evolution of life on earth, life elsewhere in our solar system, recent discoveries of extrasolar planets, and advanced civilizations elsewhere in the galaxy. Also includes topics in interstellar communication, space travel, and UFOs. Three (3) hours of lecture, and one (2) two hour lab each week.

ASTR 3415 Astrophysics (3 credits)—*Prerequisite(s): PHYS 2010, MATH 1910, or permission of instructor.* Astrophysics covers the theoretical basis of what we know about the Universe around us. Topics include stellar atmospheres and spectra, stellar interiors, nuclear physics, stellar evolution and the HR diagram, and galactic structure. Galaxies: morphology and evolution; Cosmology: Hubble's law, the Big Bang theory, general relativity, and the history of the Universe. Three (3) hours of lecture each week.

ASTR 3970 Variable Stars (2 credits)—*Prerequisite(s): ASTR 1010 and ASTR 1020; Corequisite(s): Permission of the instructor.* A hands-on laboratory course on variable stars. Students will make approximately weekly observations of variable stars using the 14-inch Celestron telescope at the Harry D. Powell Observatory. Observations will be analyzed and light curve derived. Final data will be submitted to public archives for possible future use by astronomers around the world.

ASTR 4110 Extragalactic Astronomy (4 credits)—*Prerequisite(s): ASTR 1020 and either PHYS 2010 or PHYS 2110.* Study of the structure, properties, and evolution of normal galaxies, radio galaxies, active galactic nuclei, quasars, and the Universe as a whole.

ASTR 4900 Independent Study in Astronomy (1-3 credits)—*Prerequisite(s): ASTR 1020.* Independent investigation of a problem in astronomy of interest to the student, under the guidance of a faculty research advisor. May be repeated (up to a maximum of four credits) provided subject matter is not duplicated. Requires permission of instructor.

Business Administration

BADM

BADM 1130 Introduction to Business (3 credits)—*Prerequisite(s): Open only to lower division students.* This course is designed to provide an overview of business operations, the role of business in society, the ethical issues in business, and the various disciplines within a business organization. Guidance to first-year university students as they begin their academic work through coverage of lifestyle issues, career planning, and other relevant topics is provided.

General Studies

BASD

BASD 3210 Professional Field Experience (3 credits)—Required of all B.G.S. and B.S.P.S. students; Dean's approval required; junior standing. The purpose of this course is to increase the student's knowledge in a particular personal or career-related area through a practical learning experience or internship. This must be a new learning experience by the student and submitted in the form of a culminating project.

BGSD

BGSD 2100 Successful Online Learning (1 credit)—Introduction to philosophy of learning online and development of skills and mastery of tools essential to success in an asynchronous learning environment. The purpose of this course is to prepare students for learning via an electronic medium, which is rapidly becoming not only an academic requirement, but also a requisite in the work force. The course has two major components – (1) tips for succeeding in an online course; and (2) the mastery of technical skills in order to learn asynchronously. (fall, spring)

BGSD 2200 Multimedia Presentations Studies for General Studies (1 credit)—*Prerequisite(s): CSCI 1100.* Instruction and exercises in building presentations with Microsoft PowerPoint 2000. Students will learn how to construct elements of presentations, including outlines, speaker notes, graphics, etc. (fall, spring, summer)

BGSD 2300 Building e-Portfolios (1 credit)—This course teaches fundamentals of professional portfolio content and promotes familiarity with the process of building a professional portfolio on a web site. Students will learn the basics of professional portfolio development (including cover letters, resumes, etc.) as supported by the ETSU Office of Career Placement and Internship Services. Students will develop skills in the use of basic tools for assembling Web content (including web pages with hyperlinks) and build confidence in attempting more advanced courses in web design. (fall, spring)

BGSD 4210 Professional Field Experience (3 credits hours)—*Required of all B.G.S. students; Chair's approval required; junior standing.* The purpose of this course is to increase the student's knowledge in a particular

personal or career-related area through a practical learning experience or internship. This must be a new learning experience by the student and submitted in the form of a culminating project. (fall, spring, summer)

BGSD 4950 Special Topics in Adult Continuing Education (1-6 credits)—*Prerequisite(s): Junior or senior status and permission of the instructor; open to B.G.S. students only.* This course gives students the opportunity to study special topics and new developments in the field of adult continuing education. (fall, spring, summer)

BNKC

BNKC 1600 Financial Accounting for Bankers (2 credits)—This course is designed to provide students with a strong basic knowledge of accounting terms, concepts, and procedures. Emphasis is placed on developing a firm foundation of fundamental procedures with appropriate repetition of content through the use of examples and color-coded illustrations.

BNKC 1610 Economics for Bankers (2 credits)—This course introduces the banking community to the study of economics.

BNKC 1620 Law and Banking Principles (2 credits)—An introduction to laws pertaining to secured transactions, letters of credit, and the bank collection process.

BNKC 1630 Marketing Financial Services (2 credits)—Introduces the banking community to marketing financial services. It examines what motivates customers to purchase financial services and teaches students to develop a successful marketing plan.

BNKC 1640 Principles of Banking (2 credits)—This course provides entry-level bankers with the information they need to provide effective service to their customers, thereby having an impact on bank profitability. This information includes how banks affect the economy, why they are in business, what services they provide, and how they provide them. Students will also get a basic understanding of the interrelationships among various departments within a bank.

BNKC 1650 Developing Basic Teller Skills (2 credits)—This course reflects the changing responsibilities of the modern teller and includes the most recent compliance information. It is designed for the entry-level teller. Students are not required to have prior banking experience.

BSIS

BSIS 4210 Professional Field Experience (3 credits)—*Required of all B.S.I.S. students; Chair's approval required; junior standing.* The purpose of this course is to increase the student's knowledge in a particular personal or career-related area through a practical learning experience or internship. This must be a new learning experience by the student and submitted in the form of a culminating project. (fall, spring, summer)

BSPS

BSPS 4210 Professional Field Experience (3 credits)—*Required of all B.S.P.S. students; Chair's approval required; senior standing.* The purpose is to increase the student's knowledge in a particular personal or career-related area through a practical learning experience or internship. This must be new learning by the student and submitted in the form of a culminating project. (fall, spring, summer)

Biological Sciences

BIOL

BIOL 1010 Biology for Non-majors I (4 credits)—*Corequisite(s): BIOL 1011.* A biology course with laboratory experience in general education. The role of biology in today's society, with an emphasis on current issues in ecology, evolution, and behavior. Three (3) hours of lecture and two hours of lab. A common grade will be given in BIOL 1011/11.

BIOL 1011 Biology for Non-majors Laboratory (0 credit)—*Corequisite(s): BIOL 1010.* Laboratory exercises corresponding to Biology for Non-majors I. One (2) two-hour lab per week. Students must register for BIOL 1010. A common grade will be given in BIOL 1010/11.

BIOL 1020 Biology for Non-majors II (4 credits)—*Corequisite(s): BIOL 1021.* A biology course with laboratory experience in general education. The role of biology in today's society, with an emphasis on current issues in reproduction, growth, genetics, and biotechnology. Three (3) hours of lecture and two hours of lab per week. Students must register for BIOL 1021. A common grade will be given in BIOL 1020/21.

BIOL 1021 Biology for Non-majors Laboratory II (0 credit)—*Corequisite(s): BIOL 1020.* Laboratory exercises corresponding to Biology for Non-majors II. 1 two-hour lab per week Students must register for BIOL 1020. A common grade will be given in BIOL 1020/ 1021.

BIOL 1110 Biology for Science Majors Lecture I (4 credits)—*Corequisite: BIOL 1111.* Principles of molecular and cellular biology, including metabolism and genetic inheritance. Designed for biology majors, minors, and others who plan to take upper-level courses for which this is a prerequisite. Three (3) hours of lecture and two hours of lab. A common grade will be given in BIOL 1110/11.

BIOL 1111 Biology for Science Majors Lab I (0 credit)—*Corequisite(s): BIOL 1110.* Laboratory exercises to gain the ability to identify and use the processes of biological science with materials corresponding to Biology for Science Majors Lecture I. One (2) two-hour lab per week. A common grade will be given in BIOL 1110/11.

BIOL 1120 Biology for Science Majors Lecture II (4 credits)—*Prerequisite(s): BIOL 1110; Corequisite(s): BIOL 1121.* Principles of organismal biology, including structure and function of multicellular organisms, especially chordate animals, and flowering plants. Designed for biology majors, minors, and others who plan to take upper-level courses for which this is a prerequisite. Three hours lecture and two hours of lab per week. A common grade will be given in BIOL 1120/21.

BIOL 1121 Biology for Science Majors Lab II (0 credit)—*Corequisite(s): BIOL 1120.* Laboratory exercises to gain the ability to identify and use the processes of biological science with materials corresponding to Biology for Science Majors Lecture II. One (2) two-hour lab per week. A common grade will be given in BIOL 1120/21.

BIOL 1130 Biology for Science Majors Lecture III (4 credits)—*Prerequisite(s): BIOL 1110; Corequisite(s): BIOL 1131.* Principles of population biology including taxonomy and systematics, evolutionary processes, the phylogenetic history of life on earth, and ecological relationships. Designed for biology majors, minors, and others who plan to take upper-level courses for which this is a prerequisite. Three hours lecture and two hours of lab per week. A common grade will be given for BIOL 1130/31.

BIOL 1131 Biology for Science Majors Lab III (0 credit)—*Corequisite(s): BIOL 1130.* Laboratory exercises to gain the ability to identify and use the processes of biological science with materials corresponding to Biology for Science Majors Lecture III. One (2) two-hour lab per week. A common grade will be given in BIOL 1130/31.

BIOL 1310 Concepts in Biology (4 credits)—*Corequisite(s): BIOL 1311.* A one-semester survey for non-majors that covers basic themes of biology, including cell theory, heredity, reproduction, energy conversion, interactions, and diversity. Three (3) lectures/week.

BIOL 1311 Concepts in Biology Lab (0 credit)—*Corequisite(s): BIOL 1310.* Introduction to scientific method, use of microscopes, designing and implementing experiments; data collection and interpretation. Students must enroll in BIOL1310. Two (2) hours/week.

BIOL 2190 Introduction to Computational Biology (3 credits)—This course introduces students to the general concepts of calculus, probability theory, fractals, game theory and other mathematical tools to ecology, evolution, genetics and genomics. Concepts covered may include equilibrium, stability, emergence of complexity, hypothesis testing, Bayesian inference, genetic algorithms etc.

BIOL/MATH 2390 Introduction to Research in Quantitative Biology (3 credits)—*Prerequisite(s): Permission of the instructor.* Students rotate between a Biological Sciences lab and the Mathematics Department. Students learn math needed to support research in biology. One rotation per semester, consisting of one research experience in each department. The course may be repeated once.

BIOL 2999 Internship/Cooperative Education (1-3 credits)

BIOL 3100 General Genetics (3 credits)—*Prerequisite(s): BIOL 1110/11, BIOL 1120/21, BIOL 1130/31, or equivalent; plus MATH 1530 or MATH 1910.* The mechanisms of genetic transmission involving the chromosome theory of inheritance, linkage, recombination and mapping, chromosomal modifications and evolution, the organization of the hereditary material and the nature of gene action, mutation, population genetics, and statistical analysis. Three (3) hours lecture. (See optional BIOL 3141.)

BIOL 3141 Genetics Laboratory (2 credits)—*Prerequisite(s) or Corequisite(s): A course in genetics*. Laboratory experiences designed to demonstrate basic genetic mechanisms including patterns of transmission, recombination, regulation, and the nature of the nucleic acids. Two (2) hour labs per week.

BIOL 3150 Cell Biology (3 credits)—*Prerequisite(s): BIOL 3100 plus one (1) year general chemistry; organic chemistry recommended.* A study of structural and functional relationships in the eukaryotic cell. Two (2) hours lecture, one (1) hour oral component.

BIOL 3151 Cell Biology Laboratory (2 credits)—*Prerequisite(s) or Corequisite(s): BIOL 3150 or equivalent*. Laboratory exercises demonstrating cell structure and function. Two (2) hour labs per week.

BIOL 3220 Comparative Anatomy (4 credits)—*Prerequisite(s): BIOL 1110/11, BIOL 1120/21, BIOL 1130/31, or equivalent*. Comparisons of structure and development of representative vertebrate systems. Three hours lecture and 2 three-hour laboratories per week.

BIOL 3230 Vertebrate Embryology (4 credits)—*Prerequisite(s): BIOL 1110/11, BIOL 1120/21, BIOL 1130/31, or equivalent*. Development of vertebrate embryos. Laboratory work based on representative organisms. Two hours lecture and (2) two-hour labs per week.

BIOL 3240 Plant Anatomy (4 credits) — *Prerequisites: BIOL 1010/11, either 1120/21 or 1130/31, or equivalent*. Introduction to the structure, growth, and development of the shoot and root systems of the vascular plants. Two hours lecture and two two-hour laboratories per week.

BIOL 3260 Animal Physiology (4 credits)—*Prerequisite(s): BIOL 1110/11, 1120/21, 1130/31, or equivalent; plus one year general chemistry.* An introductory course in general and comparative physiology dealing with physical and chemical processes in animals. Two hours lecture and (2) two-hour labs per week.

BIOL 3350 Ecology (4 credits)—*Prerequisite(s): BIOL 1110/11, BIOL 1120/21, BIOL 1130/31, or equivalent.* An introduction to the principles of ecology with emphasis on interspecific and organismal-environmental relationships as they affect the size, development, distribution, and structure of populations, communities, and ecosystems. Three hours lecture and one (2) two-hour lab per week.

BIOL 3410 Vertebrate Zoology (4 credits)—*Prerequisite(s): BIOL 1110/11, BIOL 1120/21, BIOL 1130/31, or equivalent.* Biology, collection, identification, museum preparation, and natural history of vertebrates. Lecture, laboratory, and field studies. Emphasis on vertebrates of the Eastern United States. Two hours lecture and (2) two-hour labs per week.

BIOL 3420 Plant Biology (4 credits)—*Prerequisite(s): BIOL 1110/11, BIOL 1120/21, BIOL 1130/31, or equivalent.* Basic biology of plants, including morphology, reproduction, development, physiology, ecology, relationships of major plant groups, and their green algae ancestors. Two hours lecture and two-hour laboratories per week.

BIOL 3450 Algae and Fungi (4 credits) — *Prerequisites: BIOL 1110/11, 1120/21, or 1130/31, or equivalent.* Morphology, biology, life cycles and relationships of the algae and fungi. Two hours lecture and two two-hour laboratories per week.

BIOL 3460 Invertebrate Zoology (4 credits)—*Prerequisite(s): BIOL 1110/11, BIOL 1120/21, BIOL 1130/31, or equivalent*. Morphology, biology, life cycles, and relationships of the invertebrate organisms. Two hours lecture and (2) two-hour labs per week.

BIOL 3480 General Entomology (4 credits)—*Prerequisite(s): BIOL 1110/11, BIOL 1120/21, BIOL 1130/31, or equivalent*. The biology of insects including their anatomy, physiology, life histories, behavior, taxonomy, geological history, and economic importance. Two hours lecture and (2) two-hour labs per week.

BIOL 3550 Microtechnique (2 credits)—*Prerequisite(s): BIOL 1110/11, BIOL 1120/21, BIOL 1130/31, or equivalent*. Methods for the study of plant and animal tissues. Two (2) hour labs per week.

BIOL 3992 Research Orientation (2 credits)—*Prerequisite(s): or Corequisite(s): BIOL 1110/11, BIOL 1120/21, BIOL 1130/31, BIOL 3100, MATH 1530, or MATH 1910.* Introduction to current research topics and methods in the biological sciences. Discussions of methods and experimental design, and workshops on writing and oral presentations. Students will select an area of investigation, and an appropriate faculty mentor for an individual research project, and complete a research prospectus. One two-hour meeting per week.

BIOL 3999 Cooperative Education (1-3 credits)

BIOL 4018 Honors Thesis (3-6 credits)—Open to those in university honors programs only. A capstone experience serving as the culmination of an honors curriculum.

BIOL 4037/5037 Coastal Biology Field Trip (1 credit)—*Prerequisite(s): BIOL 1110/11, BIOL 1120/21, BIOL 1130/31, or equivalent; and permission of instructor.* Intensive field survey of the coastal flora and fauna. Course may be repeated for credit with limit of one (1) credit toward major. (Extra fees.)

BIOL 4047/5047 Ecological Field Trip (3 credits)—*Prerequisite(s): BIOL 1110/11, BIOL 1120/21, BIOL 1130/31, or equivalent; and permission of instructor.* An extended field-oriented ecology course (approximately three weeks camping) to outstanding biomes of North America, i.e., deserts, alpine tundra, boreal forest and prairies, involving field instruction, specimen collection, identification of organisms in their natural habitats. Some pre-trip and post-trip classroom sessions. Course can be repeated for credit with limit of three credits toward degree. (Extra fees.)

BIOL 4147/5147 Biochemistry of Macromolecules (3 credits)—*Prerequisite(s): BIOL 1110 and one year of organic chemistry; or equivalent.* Topics include cellular organization: pH and buffering. energy changes in molecular interactions. structure and characteristics of amino acids and proteins, structure/function relationships of enzymes, carbohydrates, lipids, and studies of the production, structure, and function of nucleic acids. Three hours lecture per week.

BIOL 4157/5157 Biochemistry of Macromolecules Lab (2 credits)—*Prerequisite(s) or Corequisite(s): BIOL 4147/5147, or equivalent.* The theory and use of lab instruments and techniques will be introduced through a series of experiments designed to explore buffering, enzyme isolation and characterization, and DNA isolation and characterization. Experiment planning and interpretation of data generated by the students will culminate in journal-style reports. One four-hour lab per week.

BIOL 4167/5167 Biochemistry of Metabolism (3 credits)—*Prerequisite(s): BIOL 1110 and one year of organic chemistry; or equivalent.* The metabolism of carbohydrates, lipids, amino acids, and nucleotides will be covered with emphasis on reactions, enzymes, energy changes, pathway regulation, and pathway integration. Production of energy-rich molecules in the cell will be linked to important cellular functions (i.e., biosynthesis, movement, and transport). Three hours lecture per week.

BIOL 4177/5177 Biochemistry of Metabolism Lab (2 credits)—*Prerequisite(s) or Corequisite(s): BIOL 4167/5167 or BIOL 4147/5147; or equivalent.* The theory and use of lab instruments and techniques will be introduced through a series of experiments designed to investigate photosynthesis, electron transport, polymerase chain reactions, and enzyme kinetics. Experiment planning and interpretation of data generated by the students will culminate in journal-style reports. One four-hour lab per week.

BIOL 4247/5247 Appalachian Flora (3 credits)—*Prerequisite(s): BIOL 1110/11, BIOL 1120/21, BIOL 1130/31, or equivalent; or permission of the instructor.* Field and laboratory identification and ecology of plants of the Southern Appalachian environs. Sixteen hours Lecture and labs/field per week.

BIOL 4257/5257 Appalachian Fauna (3 credits)—*Prerequisite(s): BIOL 1110/11, BIOL 1120/21, BIOL 1130/31, or equivalent; or permission of the instructor*. Field and laboratory identification and ecology of the animals of the Southern Appalachian environs. Sixteen hours Lecture and labs/field per week.

BIOL 4267/5267 Plant Development (4 credits)—*Prerequisite(s): BIOL 3100 or permission of instructor*. Pattern of plant development from zygote or spore to mature plant. Emphasis on cell and tissue differentiation, organogenesis, and the influence of growth regulators. In the laboratory, students will observe morphogenesis and will design and undertake a project of their choice. Two hours lecture and four hours laboratory per week.

BIOL 4277/5277 Neurobiology (4 credits)—*Prerequisite(s): BIOL 1110/11, BIOL 1120/21, or equivalent*. An introduction to the study of neurobiology. Topics include fundamentals of cellular communication (action potentials, synaptic transmission, synaptic integration), sensory systems, motor systems, the neural basis of behavior, developmental plasticity, and learning. Examples are drawn from invertebrates, as well as vertebrates. Four hours lecture per week.

BIOL 4300 Seminar in Biology (2 credits)—*Prerequisite(s): Permission of instructor*. For senior biology majors and minors. Training and experience in oral presentation of recent developments in biology research.

BIOL 4337/5337 Plant Systematics (4 credits)—*Prerequisite(s): BIOL 1110/11, BIOL 1120/21, BIOL 1130/31, or equivalent*. Flowering plant classification and evolution. Characteristics and methods of traditional plant taxonomy and computer-based phylogenetic methods using morphological and molecular data sets. Plants will be studied in field and lab. Students will use data collected from plant specimens and from GenBank to conduct phylogenetic analysis in various angiosperm groups. Two hours of lecture and four hours of laboratory per week.

BIOL 4347/5347 Biogeography (2 credits)—*Prerequisite(s): BIOL 1130 or equivalent; or permission of instructor*. Global and regional patterns in the distribution, abundance, and variation of plants and animals related to geographic conditions and earth history. One two-hour lecture per week.

BIOL 4357/5357 Ethology (3 credits)—*Prerequisite(s): BIOL 1110/11, BIOL 1120/21, BIOL 1130/31, or equivalent*. An introduction to the study of animal behavior. Emphasis is placed on the ecology and evolution of behavioral patterns. Three hours lecture per week.

BIOL 4360 Evolution (3 credits)—*Prerequisite(s): Completion of 20 credits in biological science courses*. A survey of current topics related to the evolution of life on earth. Intended for senior biological sciences majors. One hour lecture and two hours discussion per week.

BIOL 4367/5367 Systems Ecology (3 credits)—*Prerequisite(s): BIOL 3350 or permission of instructor*. Computer simulation modeling of ecological systems. Three hours lecture/discussion/workshop per week.

BIOL 4450 Bryophytes, Ferns, and Seed Plants (4 credits)—*Prerequisite(s): BIOL 1110/11, BIOL 1120/21, BIOL 1130/31, or equivalent*. Principal taxa of land plants characterized and compared in terms of structural, functional, and reproductive adaptations. Two hours lecture and (2) two-hour labs per week.

BIOL 4467/5467 Ichthyology (3 credits)—*Prerequisite(s): BIOL 3410 or permission of instructor*. An introduction to the methodology of field collection, preservation, and identification of fishes. Quantitative analysis and preparation of summary reports on field collections will be emphasized. Two (2) one-hour lectures and one three-hour lab per week.

BIOL 4477/5477 Ornithology (4 credits)—*Prerequisite(s): BIOL 3410 or permission of instructor*. An introduction to the methodology of field identification, population censuses, seasonal diversity, and ecology of birds. One three-hour lecture and one three-hour lab per week.

BIOL 4597/5597 Recombinant DNA Laboratory (3 credits)—*Prerequisite(s): BIOL 1110/11, BIOL 1120/21, or BIOL 1130/31; or equivalent; plus one year organic chemistry or permission of instructor*. Theory and practice in molecular biology and recombinant DNA techniques, including recombinant DNA construction and gene transfer. One hour lecture and two three-hour laboratories per week.

BIOL 4647/5647 Molecular Biology (3 credits)—*Prerequisite(s): BIOL 3100 plus one year organic chemistry*. (BIOL 3150 recommended) Investigations into gene structure, gene expression and its regulation, and modern molecular methodology. Three hours lecture per week.

BIOL 4737/5737 Conservation Biology (4 credits)—*Prerequisite(s): BIOL 3100 or equivalent*. Underlying ecological and population genetic forces governing the structure and dynamics of populations. Evaluation of current conservation strategies. Labs include field experiments on biodiversity, species monitoring strategies, field trips and use of population viability analysis. Two hours lecture, one hour discussion, and three hours laboratory per week.

BIOL 4747/5747 Population Genetics (4 credits)—*Prerequisite(s): BIOL 3100 or equivalent*. An exploration of mechanisms of genetic change in populations. Theoretical predictions and empirical evidence are considered. Emphasis on molecular-based methods. A combination of field and lab exercises. Three hours lecture and one three-hour lab per week.

BIOL 4757/5757 Developmental Biology (3 credits)—*Prerequisite(s): BIOL 3230 or permission of instructor*. A study of advanced topics in developmental biology such as the role of extracellular matrix and gene regulation on gametogenesis and embryogenesis. Two one-hour lectures and one (2) two-hour lab per week.

BIOL 4767/5767 Plant Physiology (4 credits)—*Prerequisite(s): BIOL 1110/11, BIOL 1120/21, BIOL 1130/31, or equivalent; and CHEM 2010*. A course in plant physiology dealing with physical and chemical processes affecting the growth, metabolism, and reproduction of plants. Includes study of the highly developed and diverse responses of plants to their environment. Three hours lecture, one hour oral component per week.

BIOL 4857/5857 Aquatic Biology (3 credits)—*Prerequisite(s): BIOL 3350*. Field trips collection, identification, and ecology of freshwater plants and animals. One hour lecture and Two (2) hour labs per week.

BIOL 4867/5867 Marine Biology (4 credits)—*Prerequisite(s): BIOL 1110/11, BIOL 1120/21, BIOL 1130/31 or equivalent*. (BIOL 3460 recommended) Principles of marine biology with emphasis on habitats and ecological processes. Two hours lecture and (2) two-hour labs per week.

BIOL 4900 Independent Studies (1-4 credits).

BIOL 4910 Research in Biology (1-4 credits)—*Prerequisite(s): Permission of the instructor*. Independent directed research for the advanced student. Field of study to be determined by mutual consent of the student and faculty advisor.

BIOL 4917/5917 Philosophy of the Biological and Biomedical Sciences (3 credits)—Topics of philosophical and theoretical interest generated by the biological and biomedical sciences. Includes consideration of the broader social and cultural implications of biological and biomedical theory.

BIOL 4957/5957 Special Topics in Biological Sciences (1-6 credits)—Dependent on subject matter. Selected topics in biological sciences. Offered upon sufficient demand for specific subject matter. May be repeated for different topics. Consultation with the instructor is recommended before enrollment.

BIOL 4999 Internship/Cooperative Education (1-3 credits)

Bluegrass, Old Time, and Country Music

BLUE

BLUE 1710 Introduction to Bluegrass and Country Music Theory (1 credit)—An introduction to fundamental musical principles including scales, chords, and meters commonly used in Bluegrass and Country Music.

BLUE 1810 Introduction to Sound Equipment and the Recording Studio (1 credit)—An introduction to the fundamentals of audio equipment, setup procedures, and use of live sound and recording systems.

BLUE/ANTH 2150 American Folk Music (3 credits)—A multi-cultural survey of America's diverse ethnic and regional traditions of folk

music, how they have been revived and popularized in the 20th century, and their contributions to contemporary popular culture around the world.

BLUE 2240, 3240, 4240 Bluegrass Seminar I, II, and III (1 credit)—This course focuses on listening and performance skills; musical analysis; how to engage an audience musically, visually, and verbally; how to work as a full-time or part-time musician; and how to live one's life as an artist.

BLUE 2310 Guitar I (Introductory) (1 credit)—A course for beginners, as well as those who have some playing experience. Basic flatpicked lead playing and accompaniment, with emphasis on clarity, smoothness, and solid rhythm; focus on folk, bluegrass, gospel, and country traditions.

BLUE 2330 Fiddle Harmony II (2 credits)—*Prerequisite: Permission of instructor.* A study of basic Bluegrass, Old Time and Country Music harmony fiddle techniques used in what is commonly referred to as "twin" fiddling.

BLUE 2380 Instrument Setup and Maintenance (3 credits)—A study of the anatomy, mechanics, and maintenance of stringed instruments with practical application of techniques associated with instrument setup, maintenance, diagnostics, and repair.

The following are individual instruction courses, each of which is a flexibly designed course of study under an experienced musician. It provides an opportunity for the student to gain confidence with the fundamentals of the instrument and to develop musically.

BLUE 2410, 3410, 4410 Acoustic Guitar I, II, and III (1 credit)

BLUE 2420, 3420, 4420 Country Electric Guitar I, II, and III (1 credit)

BLUE 2430, 3430, 4430 Mandolin I, II, and III (1 credit)

BLUE 2440, 3440, 4440 Bluegrass Banjo I, II, and III (1 credit)

BLUE 2450, 3450, 4450 Old Time Banjo I, II, and III (1 credit)

BLUE 2460, 3460, 4460 Bluegrass Fiddle I, II, and III (1 credit)

BLUE 2470, 3470, 4470 Old Time Fiddle I, II, and III (1 credit)

BLUE 2480, 3480, 4480 Dobro I, II, and III (1 credit)

BLUE 2490, 3490, 4490 Acoustic Bass I, II, and III (1 credit)

BLUE 2510, 3510, 4510 Bluegrass Band I, II, and III (1-3 credits)—A flexibly designed course of study under the direction of an experienced musician and band leader with focus on individual instrumentation and ensemble performance.

BLUE 2520, 3520, 4520 Old Time String Band I, II, and III (1-3 credits)—A flexibly designed course of study under the direction of an experienced musician and band leader with focus on individual instrumentation and ensemble performance.

BLUE 2530, 3530, 4530 Country Band I, II, III (1-3 credits)—A flexibly designed course of study under the direction of an experienced musician and band leader with focus on individual instrumentation and ensemble performance.

BLUE 2540 Celtic Band I (1-3 credits)—*Corequisite: Students enrolled in Celtic Band I must also be enrolled in at least one hour of individual instruction in voice or an appropriate instrument.* A flexibly designed course of study under the direction of an experienced Celtic-style musician and band leader, with focus on basic individual instrumentation and ensemble performance.

BLUE 2610 Individual Instruction Voice I (1 credit)—A study of basic vocal techniques applicable to Bluegrass, Old Time and Country singing under the private instruction of an experienced vocalist.

BLUE 2710 Bluegrass and Country Music Theory I (2 credits)—*Prerequisite: BLUE 1710.* A practical study of musical principles used in Bluegrass and Country Music including melody, harmony, and rhythm; intervals; standard musical notation; and the Nashville Number System.

BLUE 2720 Bluegrass and Country Music Theory II (2 credits)—*Prerequisite: BLUE 2710.* A practical study of advanced musical principles used in Bluegrass and Country Music including progressive melody, harmony, and rhythm; extended intervals; advanced use of the Nashville Number System; tablature; solo creation; and improvisation.

BLUE 2810 Sound Reinforcement (2 credits)—*Prerequisite: A final grade of B- or higher in BLUE 1810.* A practical study of live sound reinforcement techniques and procedures including transport, set up, and operation of live sound equipment.

BLUE 3110 Introduction to Bluegrass Music (3 credits)—An introductory study of the principal figures in bluegrass music, their lives, times, and music.

BLUE 3120 Country Music Then and Now (3 credits)—A study of the history of country music including genres of country music; impact of country music traditions on other music; history of country music in America; country music outside the United States.

BLUE 3130 Bluegrass Music History I (3 credits)—A study of the music and lives of Bluegrass artists through 1965.

BLUE 3140 Bluegrass Music History II (3 credits)—*Prerequisite: BLUE 3130.* A study of the music and lives of Bluegrass artists from 1966 - 2000.

BLUE 3320 Guitar II (Intermediate) (1 credit)—For students who have completed Guitar I and those who play at an equivalent or higher level. An expansion of skills developed in BLUE 2310-Guitar I, with an introduction to Doc Watson-style crosspicking and Merle Travis-style fingerpicking.

BLUE 3330 Fiddle Harmony II (2 credits)—*Prerequisite: Permission of instructor.* A study of intermediate Bluegrass, Old Time and Country Music harmony fiddle techniques used in what is commonly referred to as "twin" fiddling.

BLUE 3540 Celtic Band II (1-3 credits)—*Prerequisite: Permission of instructor; Corequisite: Students enrolled in Celtic Band II must also be enrolled in at least one hour of individual instruction in voice or an appropriate instrument.* A flexibly designed course of study under the direction of an experienced Celtic-style musician and band leader with focus on intermediate individual instrumentation and ensemble performance.

BLUE 3710 Chart Writing and Application (2 credits)—*Prerequisites: BLUE 2720 or BLUE 2220.* A practical study and application of the industry standard style of chart writing used in Bluegrass and Country Music.

BLUE 3810 Recording Engineering for Musicians (2 credits)—*Prerequisite: A final grade of B- or higher in BLUE 1810.* A practical study of recording engineering techniques and procedures in a modern recording laboratory.

BLUE 3820 Record Production for Musicians (2 credits)—*Prerequisite: A final grade of B- or higher in BLUE 1810.* A practical study of the various roles of record producers, production techniques, and procedures.

BLUE 4130 Survey of Contemporary Bluegrass (3 credits)—An overview of the diverse musical forms that makeup contemporary bluegrass music, with an emphasis on the lasting contributions of significant artists and the tension between traditional and exploratory approaches.

BLUE 4147/5147 Bluegrass and America's Music (3 credits)—The musical and commercial interaction between bluegrass and American Folk music, jazz, pop, gospel, blues, rock, and classical traditions.

BLUE 4150 Roots of Bluegrass and Country Music (3 credits)—An exploration of the diverse musical genres preceding the emergence of bluegrass music, which serves as the building block for the structure of bluegrass music.

BLUE 4220 Bluegrass Harmony Part Singing (3 credits)—A study of bluegrass harmony singing, chord structure, and theory, emphasizing learning intervals, numbers, and elementary ear training.

BLUE 4230 Songwriting (1 credit)—Students will create original songs under the tutelage of a songwriter with professional credentials.

BLUE 4257/5257 Band Leadership Skills (4 credits)—*Prerequisite: By permission only.* An experiential course that helps students develop band

leadership skills through collective and individual study and practical experience.

BLUE 4330 Fiddle Harmony III (2 credits)—*Prerequisite: Permission of instructor.* A study of advanced Bluegrass, Old Time and Country Music harmony fiddle techniques used in what is commonly referred to as "twin" fiddling.

BLUE 4510 Bluegrass Band III (1 credit)

BLUE 4520 Old Time String Band III (1 credit)

BLUE 4540 Celtic Band III (1-3 credits)—*Prerequisite: Permission of instructor; Corequisite: Students enrolled in Celtic Band III must also be enrolled in at least one hour of individual instruction in voice or an appropriate instrument.* A flexibly designed course of study under the direction of an experienced Celtic-style musician and band leader with focus on advanced individual instrumentation and ensemble performance.

BLUE 4610 Individual Instruction Voice I (1 credit)—*Prerequisite: Permission of instructor.* A study of advanced vocal techniques applicable to Bluegrass, Old Time and Country singing under the private instruction of an experienced vocalist.

BLUE 4810 Capstone Recording and Performance Project (4 credits)—*Prerequisite: By permission of instructor only.* An experiential course that teaches students to produce a professional-quality demo recording.

BLUE 4900 Independent Study (1-3 credits)

BLUE 4957/5957 Special Topics (1-6 credits)

Communicative Disorders

CDIS

CDIS 4000 Communication Sciences and Disorders (3 credits)—An introduction to the professions of audiology and speech-language pathology providing an overview of communication sciences and normal communicative processes contrasted with disorders of speech, language, and hearing. Course also requires students to observe speech-language pathologists and audiologists perform evaluations and therapy.

CDIS 4017/5017 Speech and Hearing Science I (4 credits)—A study of the basic theories, physics, and acoustics of speech production. Information pertaining to the anatomy and physiology of spoken language are also presented. This course provides a laboratory experience that includes an introduction to the International Phonetic Alphabet and transcriptions of speech from typical speakers with different regional dialects.

CDIS 4027/5027 Speech and Hearing Science II (4 credits)—*Prerequisite(s): CDIS 4017.* A study of the physiologic acoustics of the auditory periphery, neurophysiology of the speech and hearing systems, and an introduction to research tools in speech and hearing science. The laboratory portion of the course provides interactive demonstrations pertaining to the physiologic acoustics of the auditory periphery, neurophysiology of the speech and hearing systems, and an introduction to instrumentation used in speech and hearing science.

CDIS 4037/5037 Anatomy and Physiology of the Speech and Hearing Systems (3 credits) — A study of the basic anatomy and physiology of speech/hearing mechanisms. Theories and mechanisms of speech production and hearing will also be covered.

CDIS 4060 Language Development (3 credits)—*Prerequisite(s): CDIS 4000 and CDIS 4017.* A study of the psycholinguistic aspects of language including cultural influences, the complex nature of language, the language-learning process, and the strategies involved in analyzing normal child communication.

CDIS 4200 The Clinical Process (3 credits)—*Prerequisite(s): CDIS 4000.* A lecture-discussion-demonstration course which includes supervised observation of the evaluation and treatment of children and adults with disorders of speech, language, and/or hearing, as well as information related to clinical procedures and reports.

Chemistry

CHEM

CHEM 1000 Chemistry and Well-Being (4 credits)—A terminal semester course designed to fulfill the General Education core requirement for a laboratory science course for non-science majors. The course will include discussions of chemistry and its relevance in society and our individual well-being. It will explore the role chemical science plays in understanding environmental issues, nutrition and health, drugs, medicine, genetic engineering, modern materials, energy sources, and other chemical technological progress important to our standard of living. Experimental projects to be done inside or outside of the classroom setting are included. These experiments are designed to illustrate and explore the principles/concepts and applications of chemistry.

CHEM 1030 Introduction to Chemistry Survey (4 credits)—This course, designed for the non-science major, presents an interdisciplinary approach to the basic principles of chemistry. The importance of chemistry in today's society, its relevance to many environmental questions, and other current issues involving chemistry will be emphasized. Three (3) hours of lecture and one (1) hour of lab/discussion per week.

CHEM 1040 Introduction to General Chemistry (3 credits)—This course is designed for students who require the General Chemistry 1110/1120 sequence but lack mastery of the basic principles needed to succeed in this course. It focuses on basic math skills and elementary chemistry principles needed in General Chemistry. The course will enable students to master basic math and elementary chemistry principles needed in the general chemistry sequence.

CHEM 1110-20 General Chemistry Lecture (4 credits ea.)—*Corequisite(s): CHEM 1111/21.* The basic course for students who expect to major in chemistry, as well as those who wish to meet entrance requirements of professional schools. Three (3) hours of lecture-recitation per week. A common grade will be given.

CHEM 1111-21 General Chemistry Laboratory (0 credit)—*Corequisite(s): CHEM 1110/20.* One (3) three-hour lab per week. A common grade will be given.

CHEM 2010/20 Organic Chemistry Lecture (3 credits)—*Prerequisite(s): CHEM 1120/21; Corequisite(s): CHEM 2011/21.* The basic course in the study of compounds of carbon. Three (3) hours of lecture per week. Must be taken in proper sequence.

CHEM 2011/21 Organic Chemistry Laboratory (2 credits ea.)—*Corequisite(s): CHEM 2010/20. (Laboratory to accompany CHEM 2010/20.)* One (4) four-hour lab period per week. Must be taken in proper sequence.

CHEM 2220 Quantitative Analysis Lecture (2 credits)—*Prerequisite(s): CHEM 1120/21; Corequisite(s): CHEM 2221.* Quantitative treatment of equilibria. Introduction to statistical treatment of data, spectroscopy, and instrumental methods of analysis. Two hours of lecture per week.

CHEM 2221 Quantitative Analysis Laboratory (2 credits)—*Corequisite(s): CHEM 2220.* (Laboratory to CHEM 2220) One (4) four-hour lab period per week.

CHEM 2989-99 Internship/Cooperative Education (1-3 credits)—The application of classroom learning experience to on-the-job training.

CHEM 3008 Honors Research (2 credits) — Honors students should enroll in this course during the Fall semester of their junior year. The class will meet weekly for an in-class discussion about the process of research and conducting literature searches. Students will outline a plan for their senior honors thesis, and prepare a prospectus for their research.

CHEM 3110 Descriptive Inorganic Chemistry (3 credits)—*Prerequisite(s): CHEM 1120/21.* A study of properties and reactions of inorganic compounds with emphasis on trends in the Periodic Table. Three (3) hours of lecture-recitation per week.

CHEM 3611 Introductory Integrated Laboratory (2 credits)—*Corequisite(s): CHEM 3710 or CHEM 3750.* Introduction to advanced chemistry laboratory techniques with emphasis on physics-chemical measurements. Includes data handling, report writing, and work with classical and instrumental methods. One (4) four-hour lab period per week.

CHEM 3710 Principles of Physical Chemistry Lecture (3 credits)—*Prerequisite(s): CHEM 2220/21; Prerequisite(s) or Corequisite(s): CHEM 2010 and General Physics; Corequisite(s): CHEM 3611.* A brief

physical chemistry course for the Chemistry Concentration program, with a life science emphasis. Three (3) hours of lecture per week.

CHEM 3750-60 Physical Chemistry (3 credits)—*Prerequisite(s): Physics and Calculus; CHEM 2010/11, CHEM 2220/21 Corequisite(s): CHEM 3611 (for 3750); CHEM 4611, CHEM 4621, or CHEM 4631.* Physical chemistry for those planning a career in the field of chemistry. Elements of thermodynamics, kinetics, and quantum chemistry. Three (3) hours of lecture per week.

CHEM 3989-99 Internship/Cooperative Education (1-3 credits)

CHEM 4010 Seminar in Chemistry (2 credits)—For senior chemistry majors and minors. Research reports by students, faculty, and invited outside speakers on recent advances in chemistry. May be repeated once for credit.

CHEM 4018 Honors Thesis (3-6 credits)—Open to those in university honors programs only. A capstone experience serving as the culmination of an honors curriculum.

CHEM 4110 Advanced Inorganic Chemistry Lecture (3 credits)—*Prerequisite(s) or Corequisite(s): CHEM 3750/60.* Principles of theoretical and descriptive inorganic chemistry. Three lecture-recitation hours per week.

CHEM 4200 Principles of Instrumental Analysis (3 credits)—*Prerequisite(s): CHEM 2220/21.* Theory, instrumentation, and application of spectral methods (UV-VIS, IR, RAMAN, AA, AE, NMR, MS, etc.), electroanalytical methods (potentiometry, voltammetry, etc.), and separation techniques (GC, HPLC, TLC, etc.). Three (3) hours of lecture per week.

CHEM 4611 Advanced Integrated Laboratory - Dynamics (2 credits)—*Prerequisite(s): CHEM 3611.* Advanced chemistry laboratory with emphasis on dynamic properties of chemical systems. Both classical and modern spectroscopic methods, such as UV-VIS, IR, and NMR, will be used. When possible, compounds used will be synthesized by the student. One (4) four-hour lab period per week.

CHEM 4621 Advanced Integrated Laboratory - Structure (2 credits)—*Prerequisite(s): CHEM 3611.* Advanced chemistry laboratory with emphasis on structural analysis by modern instrumental techniques. When possible, compounds will be synthesized by the student. One (4) four-hour lab period per week.

CHEM 4631 Advanced Integrated Laboratory - Analytical Techniques (2 credits)—*Prerequisite(s): CHEM 3611.* Advanced chemistry laboratory with emphasis on modern analytical techniques. Uses and limitations of the various techniques will be stressed. When possible, compounds used will be synthesized by the student. One (4) four-hour lab period per week.

CHEM 4817/5817 Introduction to Industrial Chemistry (3 credits)—*Prerequisite(s): CHEM 2020/21.* Engineering of chemical reactions, mass and energy balance, process development and control, polymer chemistry and industrial pollution.

CHEM 4900 Research in Chemistry (1-2 credits)—*Prerequisite(s): Permission of the chair of the department.* Independent, directed research for the advanced student. Field of study to be determined by mutual consent of the student and faculty advisor.

CHEM 4957/5957 Special Topics in Chemistry (1-6 credits)

CHEM 4989-99 Internship/Cooperative Education (1-3 credits)

Chinese
CHIN

CHIN 1010 Beginning Chinese I (3 credits)—Chinese 1010 is a course which will introduce students to the Chinese (Mandarin) language. Students will learn how to speak, read, and write in Chinese.

CHIN 1020 Beginning Chinese II (3 credits)—*Prerequisite: CHIN 1010 or equivalent.* Chinese 1020 is a course which will continue to introduce students to the Chinese (Mandarin) language. Students will learn how to speak, read, and write in Chinese as well as learn grammar and idiomatic expressions at the beginning level.

CHIN 2010 Intermediate Chinese I (3 credits)—*Prerequisite: CHIN 1020 or equivalent.* Continued instruction and practice in written and spoken Chinese.

CHIN 2020 Intermediate Chinese II (3 credits)—*Prerequisite: CHIN 2010 or equivalent.* Continued instruction and practice in written and spoken Chinese.

Criminal Justice and Criminology
CJCR

CJCR 1100 Introduction to Criminal Justice (3 credits)—Conceptions of law and crime, the nature and extent of crime, and an overview of the interrelated criminal justice agencies.

CJCR 1200 Human Relations in Criminal Justice (3 credits)—An examination of models of human behavior, with particular emphasis on antecedents and conditions that affect personnel performance in criminal justice environments.

CJCR 1500 Criminal Investigation (3 credits)—Fundamentals of criminal investigation procedures. Crime scene search and recording, collecting and preserving evidence, scientific and technical aids, and case preparation.

CJCR 1600 Forensic Science (3 credits)—An introduction to methods used by crime laboratories and the chemical and physical interpretation of the data obtained by crime scene search to include blood samples, fingerprints, tool marks, fiber and fabric identification.

CJCR 2540 Criminal Law (3 credits)—The historical foundations of criminal law, elements of crime, purposes and functions of law, defenses to prosecution, and limits of the law.

CJCR 2600 Crime Scene Investigation (3 credits)— Detecting, collecting, and preserving physical evidence from crime scenes with emphasis placed on documenting and collecting physical evidence. Current research, case studies, and analysis of physical evidence will be discussed. This course involves hands-on exercises and investigating mock crime scenes.

CJCR 2989-99 Internship/Cooperative Education (1-3 credits)

CJCR 3000 Statistics for Criminal Justice and Criminology (3 credits)—*Prerequisite(s): MATH 1530 or equivalent.* Criminal statistics, hypotheses and theories, research and related problems, and ways and means of evaluating the effectiveness of criminal justice activities.

CJCR 3010 Research Methods for Criminal Justice and Criminology (3 credits)—Problems in the design and execution of criminal justice research. Various research strategies, including sample surveys, observation, experiments, and evaluation are discussed. Also reviewed are various sources of criminal justice data.

CJCR 3100 Patterns of Criminal Behavior (3 credits)—The social and psychological aspects of criminal behavior, criminality as a developmental process. Specific offender types will be examined.

CJCR 3300 Criminal Justice Ethics (3 credits)—Examination of ethical issues arising in the criminal justice field including police deviance, judicial misconduct, control of inmates in correctional settings, and field research dilemmas.

CJCR/SOCI 3310 Criminology (3 credits)—An analysis of the major sociological theories of crime causation, sociological aspects of types of offenders, and techniques of measuring crime.

CJCR 3330 Police in America (3 credits)—Historical and philosophical evolution of the police. Emphasis will be placed on functions and control of police in a democratic society and the analysis of policing from a social science perspective.

CJCR 3440 Corrections in America (3 credits)—Philosophical and historical evolution of punishment in the United States. With emphasis on prisons, jails, community-based corrections, efficiency of social control policies, such as "boot camp" prisons, rehabilitation, juvenile detention, capital punishment, etc.

CJCR 3444 Microcomputers as a Research Tool (3 credits)—*Prerequisite(s): CSCI 1100, MATH 1530, CJCR 3000.* In depth application of microcomputers in criminological research. Emphasis on data analysis

using various software (SPSS/PC+, SAS). Requires use of e-mail and Internet.

CJCR 3500 Juvenile Justice: Theory and Process (3 credits)—History, philosophy, and evaluation of the juvenile justice system. Emphasis on theoretical explanations of delinquency, gangs, and violence, as well as examination of types of social interventions by police, courts, corrections, and other organizations.

CJCR 3610 Terrorism and Counter-Terrorism (3 credits)—An examination of terrorism and counter-terrorism. The course will cover both domestic and international terrorism and efforts to prevent terrorism.

CJCR 3650 Criminal Procedure (3 credits)—Federal/state laws and rules of arrest, search and seizure of evidence, interrogation of suspects, obtaining confessions, and criminal identifications.

CJCR 3989-99 Internship/Cooperative Education (1-3 credits)

CJCR 4007/5007 Correctional Counseling (3 credits)—An overview of counseling methods, principles and procedures of therapeutic techniques, and processes for use in various correctional environments.

CJCR 4018 Honors Thesis (3-6 credits)—Open to those in university honors programs only. A capstone experience serving as the culmination of an honors curriculum.

CJCR 4026 Themes of Justice (3 credits)—Introduction to philosophical concepts of justice utilizing a variety of films. Examination of issues such as prejudice, violence, punishment, and peacemaking in the context of social and criminal justice.

CJCR 4027/5027 Media and Crime (3 credits)—Examination of relationship between media and crime, with special emphasis on television. Course content examines both reporting and non-news media content relevant to crime and the criminal justice system, the study of audience effects, and different response theories about media dissemination of news, opinion, information, and entertainment.

CJCR 4222 Criminal Justice Administration (3 credits)—Examination of principles of management and administration of criminal justice organizations. Emphasis on planning, budgeting, staffing, decision-making, policy development, and program evaluation.

CJCR 4337/5337 The Death Penalty in America (3 credits)—Various theoretical, ethical, moral, and empirical issues surrounding capital punishment will be explored. Students will be exposed to conflicting points of view regarding race, gender, class, and the death penalty. A critical examination of all sides of this debate will be undertaken.

CJCR 4560 White-Collar Crime (3 credits)—Etiology and epidemiology of upper-class criminality. Emphasis on organizational, occupational, and crimes by the government. Functions of social control, punishment, and regulatory agencies are examined.

CJCR 4580 Violence: The American Experience (3 credits)—Examination of the role of violence in American society. Etiological and epidemiological issues addressed with emphasis on various forms of violence such as homicide, gangs, hate groups, white-collar crime, and violence against women.

CJCR 4670 Race, Gender and Crime (3 credits)—Examination of experiences of women and people of color with agencies of social control. Comparisons of crime rates, types of criminal offending, and victimization including discussion of sexual and racial harassment in the workplace.

CJCR 4680 Issues in Criminal Justice Policy and Criminology Research (3 credits)—*Prerequisite(s): CJCR 1100, senior level standing, or permission of the instructor.* Current issues in criminal justice policy and criminology research. The course will deal with new research and policy implications in a wide range of areas depending upon the instructor teaching the course. Topics may include research methodological issues, police operations, correctional treatment programs, court and legal issues, issues and research in the area of forensic science, and criminological theory.

CJCR 4800 Field Experience in Criminal Justice (12 credits)—*Prerequisite(s): Prior arrangement with instructor, senior status, and departmental approval of application.* A 450-hour field experience placement in a local or regional criminal justice agency or facility. The student will learn through orientation, observation, conferences, and work experience.

CJCR 4850 Criminal Justice and Family Violence (3 credits)—An examination of the various forms of family violence as they relate to the criminal and juvenile justice system. Evaluation of alternative policies for intervention by police, courts, and correctional agencies.

CJCR 4900 Independent Study in Criminal Justice (1-3 credits)—*Prerequisite(s): Consent of department chair.* Directed study in specific areas of criminal justice literature not covered by organized undergraduate courses. A detailed research paper required.

CJCR 4950 Special Topics in Criminal Justice and Criminology (3 credits)—A seminar on selected topics of contemporary interest in criminal justice and criminology.

CJCR 4957/5957 Special Topics in Criminal Justice (1-6 credits)—*Prerequisite(s): Senior or graduate status.* A seminar on selected topics of contemporary interest.

CJCR 4989-99 Internship/Cooperative Education (1-3 credits

Cardiopulmonary Science
CPSC

CPSC 3000 Foundations of Cardiopulmonary Science (4 credits)—*Prerequisite(s): ALHE 2010 and ALHE 2020; Acceptance into the Cardiopulmonary Science program; Corequisite(s): CPSC 3010 and CPSC 3040.* Basic modes of cardiopulmonary care are examined to understand their principles of application to patients. A discussion will be provided on the indications, hazards, contraindications, and assessments of various patient care modalities. Modes of care include medical gas therapy, aerosol and humidity therapy, postural drainage and percussion, and lung hyperinflation.

CPSC 3010 Foundations of Cardiopulmonary Science Lab (3 credits)—*Prerequisite(s): ALHE 2010 and ALHE 2020; Acceptance into the Cardiopulmonary Science program; Corequisite(s): CPSC 3000 and CPSC 3040.* Cardiopulmonary equipment utilized to perform basic modalities of care will be examined in detail. Emphasis placed on the assembly, maintenance, troubleshooting, adjustment, and application of equipment to patients. Laboratory practice will allow students to obtain operational proficiency prior to actual clinical experience. A wide variety of equipment will be introduced to include oxygen therapy, aerosol and humidity therapy, hyperinflation devices, chest physical therapy, and non-invasive monitors.

CPSC 3040 Pharmacology in Cardiopulmonary Science (3 credits)—*Prerequisite(s): ALHE 2010 and ALHE 2020; Acceptance into the Cardiopulmonary Science program; Corequisite(s): CPSC 3000 and CPSC 3010.* Introduction into various pharmacological agents utilized in patients with cardiopulmonary dysfunction. An in depth discussion will be conducted on the mode of action, classification, indications, contraindications, hazards, and methods of medication delivery.

CPSC 3100 Cardiopulmonary Critical Care (3 credits)—*Prerequisite(s): CPSC 3000, CPSC 3010, and CPSC 3040; Corequisite(s): CPSC 3110 and CPSC 3150.* Study and practice of acute and emergency airway care, arterial blood gas analysis, mechanical ventilation, infectious control, and other areas of critical care.

CPSC 3110 Cardiopulmonary Critical Care Lab (3 credits)—*Prerequisite(s): CPSC 3000, CPSC 3010, and CPSC 3040; Corequisite(s): CPSC 3100 and CPSC 3150.* This course is the corresponding laboratory course for CPSC 3100. Students will set up, operate, maintain, and troubleshoot machines that are used in the treatment of critically ill patients. Students are required to demonstrate operational proficiency in various cardiopulmonary critical care equipment and procedures prior to enrolling for CPSC 3350.

CPSC 3140 Cardiopulmonary Disease Pathology (3 credits)—*Prerequisite(s): CPSC 3100 and CPSC 3110; Corequisite(s): CPSC 3350.* A discussion will be conducted on the etiology, pathophysiology, clinical manifestations, and prognosis of various cardiopulmonary diseases. Included will be the respiratory care practitioner's role in the successful treatment of these disorders.

CPSC 3150 Clinical Education I (3 credits)—*Prerequisite(s): CPSC 3000, CPSC 3010, and CPSC 3040; Corequisite(s): CPSC 3100 and CPSC 3110.* Clinical experience will introduce the student to the basic modalities in the treatment of cardiopulmonary diseases. Students will rotate to several local hospitals during the semester. Students will obtain proficiency

in oxygen therapy, aerosol and humidity therapy, hyperinflation devices, chest physical therapy, patient assessment, and medical gas therapy.

CPSC 3350 Clinical Education II (4 credits)—*Prerequisite(s): CPSC 3150; Corequisite(s): CPSC 3140.* This course allows the student to apply critical care principles taught in courses CPSC 3100 and 3110 in actual clinical settings. Students will be responsible for the initiation, discontinuation, and evaluation of various cardiopulmonary critical care equipment.

CPSC 3550 Patient Centered Practice (3 credits)—*Prerequisite(s): CPSC 3150; instructor approval.* This course is focused on improving patient care through writing and using patient-driven protocols. Students explore AARC clinical practice guidelines and regional practices, comparing differences or similarities in practice. There is an emphasis is on teaching patients and families how to perform modalities and actively participate in the return to wellness. This course is conducted using the World Wide Web (www) and an online laboratory.

CPSC 4100 Advanced Cardiopulmonary Critical Care (3 credits)—*Prerequisite(s): CPSC 3100, CPSC 3110, and CPSC 3140; Corequisite(s): CPSC 4150, CPSC 4500, and ALHE 4060.* This course provides a study of advanced cardiopulmonary technology utilized in the critical care settings. Students will be required to complete Advanced Cardiac Life Support as part of this course. Also, topics include hemodynamic monitoring, advance mechanical ventilation, and therapist-driven protocols.

CPSC 4150 Clinical Education III (3 credits)—*Prerequisite(s): CPSC 3350; Corequisite(s): CPSC 4100, CPSC 4500, and ALHE 4060.* This course will place the student in advanced and specialized areas in cardiopulmonary care. During the semester the student will be exposed to clinical areas including advanced critical care monitoring, intubation, neonatal/pediatrics, home health care, sleep disorders, cardiopulmonary stress testing, and metabolic cart studies.

CPSC 4200 Neonatal and Pediatric Cardiopulmonary Care (3 credits)—*Prerequisite(s): CPSC 4100 and CPSC 4500; Corequisite(s): CPSC 4350 and ALHE 4070.* The process of growth and development associated with cardiopulmonary care from the fetus to the adolescent will be discussed. Coursework will include a dialogue on the complications and risk factors associated with birth. Techniques of diagnosis and treatment of neonatal cardiopulmonary emergencies will be discussed. Upon the successful completion of this course, students will fulfill the requirements for the Neonatal Advanced Life Support program.

CPSC 4350 Clinical Education IV (3 credits)—*Prerequisite(s): CPSC 4150; Corequisite(s): CPSC 4200 and ALHE 4070.* This course emphasizes cardiac diagnostics, cardiac and pulmonary rehabilitation, neonatal/pediatrics, pulmonary function testing, and long-term care. Students are required to successfully complete computerized clinical simulation modules to review, enhance, and synthesize professional cognates and skills.

CPSC 4500 Cardiopulmonary Diagnostic and Therapeutic Care (3 credits)—*Prerequisite(s): CPSC 3100, CPSC 3110, and CPSC 3140; Corequisite(s): CPSC 4100, CPSC 4150, and ALHE 4060.* A discussion will be held on the use of diagnostic equipment utilized in the therapeutic treatment of patients with cardiopulmonary diseases. Topics include cardiac diagnostic tools, pulmonary rehabilitation, polysomnography, cardiopulmonary stress testing, metabolic cart, and pulmonary function studies.

Computer and Information Sciences
CSCI

CSCI 1038 Honors Orientation Seminar (1 credit)—*Prerequisite(s): Admission to College of Business and Technology or University Honors Program.* This course will fully orient the student to the expectation for an honors student. Discussion and activities will relate to preparation for academic success and developing information technology skills.

CSCI 1100 Using Information Technology (3 credits)—Students will gain a working knowledge of word-processing, spreadsheets, electronic communication, and online database searching and will learn the skills necessary to integrate electronic information from various sources. Students learn through both lecture and hands-on experience. (fall, spring, summer)

CSCI 1101 Introduction to Spreadsheets (1 credit)—*Prerequisite(s): CSCI 1100.* Students learn the concepts of designing spreadsheets, manipulating numeric information, developing formulas, presenting numeric information, and incorporating spreadsheet information into other electronic formats. This course will include both lecture and hands-on instruction. (as needed)

CSCI 1102 Introduction to Database Applications (1 credit)—*Prerequisite(s): CSCI 1100.* Students learn how to use database software to create specific applications. Emphasis will be placed on creating databases, forms, reports, and queries. This course will include both lecture and hands-on instruction. (as needed)

CSCI 1105 Computer Applications and Music (1 credit)—*Prerequisite: CSCI 1100.* This course will investigate applications that are now standard across the industry. This course explores the technology, mechanics, ethics, and legalities involved, as well as the changing audio industry. The course will expose students to current technology used by the recording industry, film industry, television, and radio. The class includes both lecture and extensive lab experience. (as needed)

CSCI 1200 Adventures in Computing (3 credits)—This course is intended for majors and non-majors. Students will gain a working knowledge of programming basics, problem solving, algorithm development, debugging strategies, and a modern programming environment. Students will also acquire skills that can be applied to problem solving using programs and the practice of computer science. (fall, spring)

CSCI 1250 Introduction to Computer Science I (4 credits)—*Prerequisite(s): Pass or take CSCI 1100 and MATH 1720 or two years of high school algebra.* Students who are required to take developmental math must successfully complete it before taking CSCI 1250. Introduction to all aspects of the programming and problem-solving process and the elements of good programming style. A high-level language will be used as a vehicle for introducing these concepts. Laboratory use of the computer in designing, coding, debugging, and executing programs is an integral part of the course. (fall, spring)

CSCI 1260 Introduction to Computer Science II (4 credits)—*Prerequisite(s): CSCI 1100 or proficiency test and CSCI 1250.* Programming in a high-level language, including programming concepts, good style, algorithms, documentation, and elementary data structures. (fall, spring)

CSCI 1270 Business-Oriented Programming (4 credits)—*Prerequisite(s): CSCI 1250 or permission of instructor.* Designing and writing programs for business applications in a standardized high-level language with emphasis on structure, algorithms, and good programming practice.

CSCI 1510 Student in University (3 credits)—This course is meant to provide guidance to first-year university students as they begin their search for directions to take in self-definition, intellectual growth, career choices, and life skills. Only first semester students may enroll. (fall, spring)

CSCI 1710 Essentials of Web Development (3 credits)—An introduction to the World Wide Web as both a user and a developer. This course is designed to take the user from creating web pages to designing a large web site. Emphasis will be on the use of existing software applications that generate web-ready code. Other topics will include HTML, multimedia integration, and browser plug-ins. Laboratory use of software and team participation is an integral part of this course. (fall, spring, summer)

CSCI 1720 Intermediate Topics in Web Development (3 credits)—*Prerequisite(s): CSCI 1710.* This course will cover topics to help students develop professional and innovative (client-side only) Web applications. Topics will include current tools and techniques to increase the usefulness and effectiveness of Web sites, advanced Web style guidelines, integration of current Web standards, graphic design theory, appropriate use of colors, writing for the Web, introduction to usability testing, and real-world implementation considerations. (spring)

CSCI 1800 Visual Programming I (4 credits)—*Prerequisite(s): CSCI 1100 and MATH 1720 or two years of high school algebra.* An introduction to all aspects of the programming and problem-solving process and the elements of good programming style. Visual Basic will be used as a vehicle for introducing these concepts. Laboratory use of the computer in

designing, implementing, debugging, and executing programs is an integral part of the course.

CSCI 1900 Math for Computer Science (3 credits)—*Prerequisite(s): Two years of high school algebra or equivalent, Corequisite: CSCI 1250 or 1800*. Students will gain a working knowledge of set theory, mathematical induction and recursion, relations and digraphs, functions, trees and languages, finite-state machines, and languages and see how these topics are applied to the practice of computer science. (fall, spring, summer)

CSCI 2020 Fundamentals of Database (3 credits) — *Prerequisite: CSCI 1250*. This course will introduce students to the essential skills of creating, maintaining, and querying a database system. Basic methodologies for transferring data between a database and a program or web page will be covered. Also considered will be methodologies for database design to ensure consistency and accuracy of the data. (fall, spring)

CSCI 2038 Honors Professional Ethics (3 credits)—*Prerequisite(s): Admission to College of Business and Technology or University Honors Program; and sophomore standing*. A case-study approach to basic ethical issues likely to confront engineers, computer scientists, and family and consumer scientists in their professional practices.

CSCI 2042 The Computer Science of Science Fiction (3 credits)—*Prerequisite(s):CSCI 1100 or equivalent*. This course explores the history and future of computing by analyzing the portrayal of computers in works of science fiction. Students will learn how to critically analyze technical content in fiction based on the current state-of-the-art technologies in computer science.

CSCI 2100 Introduction to C (3 credits)—Syntax and structure of the C programming language. The laboratory use of the computer in designing, coding, debugging, and executing programs in C is an integral part of the course.

CSCI 2150 Computer Organization (4 credits)—*Prerequisite(s): CSCI 1900 and CSCI 1250*. A study of the physical implementation of the computer beginning with the mathematical and logical foundations followed by the component level design then concluded with an introduction to machine architecture. Topics include Boolean algebra, data representation, logic gates, combinational and sequential circuit design, memory cells, memory subsystems, memory hierarchy, I/O subsystems, I/O handling, interrupts, instruction representation, error detection, and serial protocols. A laboratory part of the course will provide hands-on experience in upgrading, repairing, and maintaining personal computers. (fall, spring)

CSCI 2160 Assembly Language (4 credits)—*Prerequisite(s): CSCI 1260 and CSCI 2150*. The assembly language of a modern computer including the instruction set, pseudo-operations, macros, and conditional assembly, object code, use of dumps, coding and linkage conventions, addressing techniques, and use of the assembler. Laboratory use of the computer in designing, coding, debugging, and executing programs is an integral part of the course. (fall, spring)

CSCI 2200 UNIX Fundamentals (3 credits)—P*rerequisite: CSCI 1260*. UNIX and UNIX-like command environments, including basic UNIX command-line commands and utilities; a representative UNIX interface; and a UNIX-based scripting language. (fall, spring)

CSCI 2210 Data Structures (4 credits)—*Prerequisite(s): CSCI 1260 and CSCI 1900*. Strings, vectors, lists, stacks, queues, arrays, trees, hash tables and associative containers, algorithm and elementary analysis. Laboratory use of the computer in designing, coding, debugging, and executing programs is an integral part of the course. (fall, spring)

CSCI 2230 File Processing (4 credits)—*Prerequisite(s): CSCI 2210 and CSCI 1260*. The study of the techniques and underlying principles of information storage and retrieval. System utilities, use of DASD, and other media. Sequential and random processing, consecutive, indexed, and other relative access methods. Laboratory use of the computer in designing, coding, debugging, and executing programs is an integral part of the course. (fall, spring)

CSCI 2235 Introduction of Unix (1 credit)—*Prerequisite(s): CSCI 1250 or CSCI 1800*. An overview of the Unix operating systems environment, with special emphasis on bash scripting. Topics include the basic Unix command set, Unix test editing, filters, key utility programs, bash shell programming, and Unix multiprocessing and job control commands.

CSCI 2300 Essentials of Information Security (3 credits) — *Prerequisite(s): CSCI 1100 or evidence of equivalent skills*. The course presents critical concepts and skills that are related to protecting information assets from harm. Topics include the history of information security, basic security-related terminology and concepts, major classes of threats to information security, model strategies for understanding and protecting against those threats, and best practices in information security. (fall, spring)

CSCI 2800 Visual Programming - Advanced Concepts (4 credits)—*Prerequisite(s): CSCI 1800 and CSCI 2020*. A study of computer programming as a rapid application development (RAD) tool using a windows interface. Object-oriented design and programming concepts will be emphasized including interface design, program flow, data flow, control structures, data types, elementary data structures, subprograms, and reusability. The current platform is Visual Basic.

CSCI 2910 Server-Side Web Programming (4 credits)—*Prerequisite(s): CSCI 1710, CSCI 2020, and CSCI 1260*. This course covers strategies for developing maintainable and efficient server-side Web applications. Topics include object-oriented methodology, server-side scripting languages, sessions, database integration with web applications, and web site security. (fall, spring)

CSCI 3030 Technical Communication (3 credits) — *Prerequisite(s): ENGL 1010 and 1020*. Preparation of written information in scientific and technical fields, including reports, specifications, handbooks, and papers designed for publication in technical and scientific journals. Exercises in oral communication as applied to scientific and technical fields will also be an integral part of the course.

CSCI 3048 Honors Methods of Research (3 credits) — *Prerequisite(s): Admission to College of Business and Technology or University Honors Program*. This course provides an introduction to the theory and practice of academic research as conducted in the computer sciences. Topics include the types of research, types of research results, the notion of quality in research, forces shaping CS research, categories of research publications, avenues for disseminating research, resources for locating published research, expectations for theses and projects reports, and suggestions for resolving standard challenges in research. Concerns related to the practice and presentation of research will be illustrated using readings from contemporary research papers and reference materials.

CSCI 3110 Advanced Topics in Web Development (3 credits) — *Prerequisite(s): CSCI 2910.* . This course will cover advanced Web coding concepts and teach students how to add an extra layer of usability to a Web page using a current scripting language or tool. Students will learn how to create accessible modern web applications that integrate current Web standards. (fall)

CSCI 3250 Software Engineering I (3 credits) — *Prerequisite(s): CSCI 2230 or 2910*. An introduction to software systems development as an engineering discipline. All phases of the software development life cycle are examined, with particular emphasis on requirements analysis, requirements specification, and preliminary design. Participation on realistic team projects, use of automated tools, written and oral communication skills, exposure to legal, professional, and ethical issues is stressed. (fall, spring)

CSCI 3350 Software Engineering II (3 credits) — *Prerequisite: CSCI 3250*. Software development as an engineering discipline with emphasis on detailed design, implementation, testing, maintenance, project management, verification and validation, configuration management, and software quality assurance. Communications (written and oral), legal, professional, ethical issues, participation on team projects, and use of automated tools are integral. (fall, spring)

CSCI 3400 Networking Fundamentals (3 credits) — *Prerequisite(s): CSCI 2150 and CSCI 1900.* A study of concerns related to the operation of computer networks. Topics include incentives for computer networking, the OSI model of network operation, network media, theory and practice

of local area networking, bridging, switching, and routing. Principles of TCP/IP network operation. (fall, spring)

CSCI 3800 Visual Programming for Programmers (4 credits)—*Prerequisite: CSCI 1260*. This course is an introduction to developing computer software applications using a language such as visual Basic. The course is designed to show how to analyze problems, design solutions, and implement applications that use current language tools. Emphasis will be given to the development of computer solutions. Laboratory use of software and team participation is essential to this course. (fall)

CSCI 4018 Senior Honors Thesis (3-6 credits)—*Prerequisite(s): Satisfactory completion of all college honors classes and advisor approval*. This thesis is a capstone academic experience bringing into focus the result of the students' learning and career interests.

CSCI 4027/5027 Information Management (3 credits)—*Prerequisite(s): Permission of instructor*. Provides an overview of DBMS concepts and topics appropriate to professionals who will be concerned with the management of DBMS servers and their use within a corporate setting. (fall)

CSCI 4048 Honors International Study (3 credits)—*Prerequisite(s): Satisfactory completion of all CAST Honors courses or college honors committee approval*. This course will consist of a two-week international study and cultural experience in addition to a pre-tour orientation.

CSCI 4057/5057 Advanced Internet Technologies (3 credits)—*Prerequisite(s): Permission of instructor*. This course is intended to give a computer science professional training in state-of-the-art Internet design tools by building upon their existing background as programmers. Topics will address advanced issues in design, optimization, and maintenance of web pages and web sites, the latest in server and client-side programming, and other emerging technologies.

CSCI 4067/5067 Networking Essentials (3 credits)—*Prerequisite(s): Permission of instructor*. This course is designed to provide students with general concepts of data communication and networking using popular conceptual models. It will also cover the system administration aspect of networking by focusing on the latest developments and the current operating systems.

CSCI 4097/5097 Emerging Technologies (3 credits)—*Prerequisite(s): Permission of instructor*. The course is designed to cover the most up-to-date topics in the computer science and technology field. Due to the ever-changing nature of technology, the topics covered in this class will change on a semester basis in order to keep up with the current developments. This course may be repeated for credit as the topics differ from semester to semester.

CSCI 4127/5127 Database Advanced Topics (3 credits)—*Prerequisite(s): CSCI 2020 and CSCI 2210 or 2910*. A study of the use and underlying principles of database management systems, and approaches for database design with an emphasis on the relational approach. Students will learn how to use good design techniques and implement methods for both small and large databases. Laboratory use of database software for designing, implementing, debugging, and maintaining database systems will be an integral part of this course.

CSCI 4157/5157 Interactive Graphics (3 credits)—*Prerequisite(s): CSCI 2210 and MATH 2250; or permission of instructor*. Point plotting, vector generation, interactive techniques, two- and three-dimensional transformations, perspective depth, hidden line elimination, shading, colors, and mapping.

CSCI 4217/5217 Ethical Issues in Computing (3 credits)—*Prerequisite(s): CSCI 3250*. A study of the ethical issues facing computer users and computer professionals including an examination of the techniques for the analysis and resolution of these issues consistent with standards of the computing profession. (fall, spring)

CSCI 4227/5227 Database Administration (3 credits)—*Prerequisite(s): CSCI 4127*. A continuation of the study of the use and underlying principles of database design begun in CSCI 4127. Students will learn more of the internal working of database management systems, as well as exploring approaches other than relational. Laboratory use of database software for designing, implementing, debugging, and maintaining database systems will be an integral part of this course. (spring, even years)

CSCI 4317/5317 Internet and Computer Law (3 credits)—*Prerequisite(s): Minimum of 60 hours completed or approval of the instructor*. A multidisciplinary overview of the relationship between the Internet and the laws of privacy, right to accurate information, access to information, first amendment, patents, trade secrets, trademarks and unfair business practices, jurisdiction, e-commerce, telecommunication, and antitrust. (fall)

CSCI 4417/5417 Introduction to System Administration (3 credits)—*Prerequisite(s): CSCI 2150, CSCI 2200, and CSCI 3400*. A survey of concerns related to management and design of computing systems and services. Topics include the practice of system administration, overview of network operating systems, best practices for system administration, fundamentals of Unix and Windows system administration, network design, and remote network access. The course will provide hands-on experience with setting up and administering Unix and Windows network operating systems. (fall, spring)

CSCI 4517/5517 Essentials of Multi-Media (3 credits)—*Prerequisite(s): Senior standing or permission of instructor*. A study of the basic elements of multimedia including text, graphic art, sound, animation, and video. This course will cover the methods of creating each of the elements of multimedia and how to combine them into meaningful units for maximum effect. The instruction will be interactive and project-oriented. Teamwork and good design will be emphasized. (summer)

CSCI 4527/5527 Computer-Based Authoring Systems (3 credits)—*Prerequisite(s): Senior standing or permission of instructor*. A survey of methods in computer-based authoring systems. This course will cover the design, implementation, and evaluation of computer-based training modules using one or more authoring systems. Emphasis will be on the use of hypermedia and multimedia tools, analysis of instructional goals and their evaluation, and using the World Wide Web for delivery of instruction. Laboratory experiences and group projects will be integral parts of this course.

CSCI 4617/5617 XML for Programmers (3 credits)—*Prerequisite(s): CSCI 2020 and (CSCI 2210 or CSCI 2910)*. An introduction to developing data models, datasets, and reports using XML family technologies. Topics include the modeling, querying, and transformation of content using XML family standards, including XML proper, XML namespaces, XML schemas, XPath, XSLT, and XQuery.

CSCI 4717/5717 Computer Architecture (3 credits)—*Prerequisite(s): CSCI 2160 and CSCI 2210*. Computer systems are viewed as consisting of a series of layers or levels one on top of another. Topics of computer architecture are presented. Microprogramming stack computers, parallel computers, pipeline processing, multiprocessors, virtual storage, cache storage, addressing schemes, and I/O and interrupt structure. (fall)

CSCI 4727/5727 Operating Systems (3 credits)—*Prerequisite(s): CSCI 2160 and CSCI 2210*. The study of operating systems which are the primary resource managers of computer hardware. The main features provided by operating systems, including process management, storage management, processor management, and auxiliary storage management are studied in detail. Topics of networking and security are introduced. Case studies of representative commercial operating systems highlight the main features common to operating systems. Use of the computing laboratory is an integral part of the course. (spring)

CSCI 4800 Senior Project in Information Technology (3 credits)—*Prerequisite(s): Senior status in Computer Science within two semesters of graduation*. This course is designed for the last semester of study. It is a capstone course that will enable the student to tie many of his/her learning experiences together. Students will work in teams to identify software projects on campus and in the community that can be accomplished in 15 weeks. Lectures will focus on professional issues that include the short-term and long-term future of IT strategies for finding and securing employment, nontechnical elements of professional competence, and strategies for continuing career development after college. (fall, spring)

CSCI 4857/5857 User Interface Programming (4 credits)—*Prerequisite(s): CSCI 1250 and CSCI 1260; or equivalent.* The concepts and programming techniques used to create applications with modern user interfaces. The course will focus on current technology as it applies to a modern operating system and software development tools. The course will focus on the user interface rather than underlying applications. Course will not count toward graduate degree requirements in computer science.

CSCI 4900 Independent Study (1-9 credits)—*Prerequisite(s): Permission of the department.* Individual or group projects done with permission of and under supervision of faculty. This course may be repeated for credit with departmental approval.

CSCI 4905 Internship (1-3 credits) — Planned and supervised work experiences related to the practice of computing. This course does not count for credit toward a student's degree. Departmental approval required.

CSCI 4910 Selected Topics in Computer Science (1-6 credits)—*Prerequisite(s): Permission of instructor.* Selected special topics in computer science not covered in other courses. This course may be repeated for credit with departmental approval if topics are significantly different. (fall and spring, as needed)

CSCI 4927 Human Computer Interaction (3 credits) — *Prerequisite(s): CSCI 3250*. Students will learn how to assess and improve the user experience between humans and electronic devices, and to design systems that enable individuals to make more effective use of computers by creating better user interfaces. (fall, spring)

CSCI 4957/5957 Special Topics in Computer Science (1-6 credits)—*Prerequisite(s): Permission of instructor.* Special topics not covered in other courses. May be repeated for credit with departmental approval if the topics are significantly different. (fall, spring, summer)

CSCI 4989/4999 Internship/Cooperative Education (1-3 credits)—Planned and supervised work experiences in business, industry, and governmental agencies. Students spend the semester working with a cooperating employer on specific assignments. Students must clear arrangements through ETSU's Office of Career and Internship Services prior to registering for this course. Students may receive compensation for this course as employees. This course does not count for credit toward a student's degree. This course may be repeated for credit.

Curriculum and Instruction

CUAI

CUAI 2440 Computer Applications in Education (3 credits)—*Prerequisite(s): CSCI-1100 or the Proficiency Exam*. This course is an examination of the specific ways computer technology contributes to the quality of the educational environment.

CUAI 3221 IDEAS: Integrating Language Arts and Social Studies (3 credits)—*Prerequisite(s): Students must be admitted to Teacher Education.* This course sets forth an integrated approach to curriculum in which social studies content, literature, and language arts skills are taught through five central themes. These central themes are I-Imagination, D-Discovery, E-Encounters, A-Adventures, and S-Synergy. Language arts skills-listening, speaking, reading, writing, and thinking-are integrated into social studies and literature experiences that are based on meaningful content and children's experience. Students are invited to get involved in a variety of creative activities and learning situations that range from individual inquiry to group interactions.

CUAI 3430 Elementary Methods in Mathematics (K-8) (3 credits)—*Prerequisite(s): HDAL 2320, HDAL 3310, SPED 2300, and admission to teacher education*. Designed to explore current methodology for teaching children and youth with a variety of learning and lifestyles. Modern techniques of classroom management are included. Appropriate field experiences are required.

CUAI 4008 Honors Service-Learning (1 credit)—*Prerequisite(s): Admission to the College of Education's honors program, HDAL 2008, and PEXS 3008*. Honors service-learning in social/cultural agencies and programs related to education.

CUAI 4018 Senior Honors Thesis (3 - 6 credits)—Open to those in university honor programs only. A capstone experience serving as the culmination of an honors curriculum.

CUAI 4210 Integrated Teaching: Language Arts (3 credits)—*Corequisite(s): CUAI 4220, CUAI 4310, CUAI 4241, and READ 4026.* This course focuses on planning for teaching and learning, writing objectives, identifying materials, and defining strategies for teaching listening, speaking, reading, and writing in grades K-6. The emphasis is on planning, implementing, and assessing an integrated program on student learning and effective teaching.

CUAI 4220 Integrated Teaching: Social Studies (3 credits)—*Corequisite(s): CUAI 4210, CUAI 4310, CUAI 4241, and READ 4026.* This course is designed to explore the current methodology and content of early- and intermediate-grade social studies education. Students design and implement learning experiences that incorporate meaningful uses of social studies concepts during field experiences.

CUAI 4230 Integrated Field Experience I (1 credit)—*Prerequisite(s): Admission to teacher education, MEDA 3570, HDAL 3310, READ 3100 and SPED 2300; Corequisite(s): CUAI 4210 and CUAI 4220.* This course is a school-based field experience that accommodates the requirements for CUAI 4210 and CUAI 4220. Students participate in planning, implementing, and evaluating integrated instruction appropriate for students of varying backgrounds and abilities.

CUAI 4240 Methods and Materials in Curriculum and Instruction (9 credits) —*Prerequisite(s): Admission to teacher education and completion of HDAL 3310, MEDA 3570, READ 3200, READ 3000, and SPED 2300; Corequisite(s): CUAI 4241.* This course focuses on methods and materials in grades K-6. Areas of emphasis are planning, implementing, and assessing teaching and learning, integrating content and technology, and understanding and applying learning theories in the content areas. Attention is given to diversity, current issues, reflection, problem solving, and the application of content.

CUAI 4241 Performance Assessment in Clinical Settings (3 credits)—*Prerequisite(s): Admission to teacher education, SCED 4321, READ 3200, EDFN 3301, and MEDA 3570; Corequisite(s): CUAI 4210, CUAI 4220, CUAI 4310, and READ 4026.* This course is a clinical field experience that accommodates the performance-based requirements for the Interdisciplinary Studies in Education major. The course provides opportunities for planning, implementing, and evaluating integrated instruction developmentally appropriate for students of varying backgrounds and abilities. Evaluation and assessment of teaching skills and practices developed in methods and content courses are emphasized. Evaluation and assessment of teaching effectiveness in relation to improvement of student learning is expected. Collection and development of pre-service teacher work samples, as well as work samples from the clinical are evaluated through the Developmental Teaching Portfolio – Evaluative Level and an oral presentation. Reflective thinking, as well as continuous, ongoing improvement in preparation for the profession of teaching are stressed.

CUAI 4310 Integrated Teaching: Mathematics (3 credits)—*Corequisite(s): CUAI 4210, CUAI 4220, CUAI 4241, and READ 4026.* This course addresses methodology and theories for teaching and learning elementary mathematics (K-6) with attention paid to problem solving, diversity, current technologies, assessment (including diagnosis and remediation), current issues in mathematics education, reflective teaching and learning, and the application of mathematics to everyday life.

CUAI 4407/5407 Integrating the Creative Arts: K-8 (3 credits)—*Prerequisite(s): Admission to Teacher Education.* Strategies for promoting the creative processes in children K-8 will be studied. Areas of focus will include visual arts, music, dance, and theatre. The importance of the arts in the development of children and their capacity for expression will be emphasized. The arts will lead to interdisciplinary study with authentic connections among and across other disciplines

The following courses are designed to examine current methodology for teaching youth and adults possessing a variety of learning and lifestyles in the secondary school (7-12) Prerequisite(s): Admission to Teacher Education.

ARTA	4419	Teaching Art in Secondary Schools	(3 credits)
BIOL	44175417	Teaching Biology in High School	(3 credits)
ENGL	4417/5417	Teaching English in Secondary Schools	(3 credits)
GEOG	4417/5417	The Teaching of Geography and Earth Science	(3 credits)
HIST	4417/5417	The Teaching of History	(3 credits)
LANG	4417/5417	Teaching of Modern Languages	(3 credits)
MATH	4417/5417	Teaching of Secondary Mathematics	(3 credits)
SCED	4417/5417	Teaching Science in Secondary School	(3 credits)
THEA	4417/5417	Teaching Theatre Grades K-12	(3 credits)

CUAI 4417/5417 Secondary School Curriculum and Methodology (3 credits)—*Prerequisite(s): Admission to Teacher Education; Corequisite(s): Enrollment in CUAI 4427/5427*. This course focuses on teaching and learning in secondary school and includes the study of curriculum and methodology suitable for a variety of life and learning styles. Evaluative Level Portfolio required. Fall, Spring

CUAI 4427/5427 Secondary School Curriculum and Methodology Field Experience (1 credit)—*Prerequisite(s): Admission to Teacher Education Corequisite(s): Enrollment in CUAI 4417/5417*. This field experience provides students with a school setting to implement class activities. Students are required to spend 30 hours working primarily with one mentor and a single class of students. Evaluative Level Portfolio required. Fall, Spring

CUAI 4437/5437 English as a Second Language (ESL) Assessment and Testing (2 credits)—This course is designed to equip participants with the knowledge and skills necessary to use multiple sources of information as they test and assess the English language proficiency of non-native speakers of English, place them for appropriate ESL and academic instruction, and assess their ongoing progress toward native-like proficiency and performance.

CUAI 4447/5447 English as a Second Language (ESL) Reading and Instruction (2 credits)—This course is designed to equip participants with the knowledge and skills necessary to develop appropriate curricula and instructional activities to fit the reading needs of non-English language background students with limitations in English proficiency that negatively affect their comprehension of English in print.

CUAI 4457/5457 English as a Second Language (ESL) Methods and Techniques (K-12) (2 credits)—This course explores pedagogical approaches to teaching Limited English Proficient (LEP) students in the K-12 arena. Some of the approaches to be explored are the natural approach, total physical response (TPR), cooperative learning, the language experience, integrated language teaching, whole language, and the cognitive academic language learning approach (CALLA).

CUAI 4467/5467 English as a Second Language (ESL) Curriculum Development (K-12) (2 credits)—This course exposes K-12 practitioners to curricular strategies that have been field tested in K-12 classrooms and found to support student learning. The strategies under investigation were developed by teachers and researchers working together to provide an education to children beginning to learn English. Strategies were selected on the basis of their usefulness in making rigorous core curriculum meaningful to students whose knowledge of English might otherwise hinder their academic progress.

CUAI 4517/5517 Math Methods for Early Childhood (3 credits)—*Prerequisite(s): Admission to Teacher Education and completion of all math requirements; Corequisite(s): This course is to be taken with CUAI 4527/5527 and 4537/5537*. This course is designed to explore current methodology and materials for teaching mathematics to PreK-4 early childhood students. Appropriate field experiences are required.

CUAI 4537/5537 Integrated Field Experience for Early Childhood (1 credit)—*Prerequisite(s): Admission to Teacher Education and successful completion of undergraduate math and science requirements; Corequisite(s): This course is to be taken with SCED 4527/5527 and CUAI 4517/5517*. This course is a school-based course that builds on earlier field experience in the program and is connected to block of methods courses. Students will be expected to work 30 hours in schools and be involved with planning and implementing instruction for students of varying backgrounds and abilities in the areas of math and science.

CUAI 4547/5547 Emergent Literacy: PreK-4 (3 credits)—*Prerequisite(s): Admission to Teacher Education*. This course is designed to provide undergraduate and graduate students with a foundation for teaching reading and other literacy competencies to children in pre-k through grade 4. Emphasis is on developing and enlarging understanding of the reading process and the teaching of reading. Strategies and protocols for effective reading and writing instruction are presented.

CUAI 4580 Directed Student Teaching (1-12 credits)—*Prerequisite(s): Admission and retention in teacher education and admission to student teaching*. Supervised teaching in the modern public school for elementary (K-8), or secondary (7-12) levels. Professional level portfolio required.

CUAI 4707/5707 Classroom Management and Discipline In Regular Classroom Settings (3 credits)—*Prerequisite(s): EDFN 3300 and EDFN 3310; or Teacher Licensure*. Major theoretical and empirical approaches to classroom management and discipline, applications of principles to specific routine and non-routine situations in regular K-12 classrooms, and problem-solving strategies.

CUAI 4900 Independent Study (1-6 credits)—Departmental approval required.

CUAI 4957/5957 Topics in Curriculum and Instruction (1-6 credits)—Dependent on subject matter. Selected topics of current interest in curriculum and instruction. Offered upon sufficient demand for specific subject matter. May be repeated for different topics. Consultation with the instructor is recommended before enrollment.

Dance
DANC

DANC 2105 Ballet (1 credit)—An introduction to ballet dance.

DANC 2115 Contemporary Dance (1 credit)—A survey of various types/styles of contemporary dances such as Country-Western, ballroom, folk and square dance, and modern dance.

DANC 2120 Folk Dance (1 credit)—A survey of various folk dances from around the world. Emphasis in basic steps and the influences of dance on culture and history.

DANC 2125 Jazz Dance (1 credit)—The course will provide the student with basic instruction and practice of jazz dance techniques, including a variety of styles. It will briefly address the history of jazz dance and the course of its development in America.

DANC 2130 Modern Dance (1 credit)—An introduction to modern dance technique.

DANC 2135 Social Dance (1 credit)—A course in various social dance steps such as tango, cha-cha, waltz, two-step, and rumba.

DANC 2150 Tap Dance (1 credit)—An introduction to tap dance technique.

DANC 2160 Country and Western Dance (1 credit)—This course will teach basic skills and dance floor etiquette used in Country/Western dance. Information will be disseminated on the history, dance terms, basic steps, and positions used in couple and line dances.

DANC 3105 Intermediate Ballet (2 credits)—Continuing development of ballet dance technique.

DANC 3125 Intermediate Jazz Dance (2 credits)—*Prerequisite: DANC* 2125. Continuing development of jazz dance technique.

DANC 3130 Intermediate Modern Dance (2 credits)—*Prerequisite: DANC 2130*. Continuing development of modern dance technique.

DANC 3135 Intermediate Ballroom Dance (2 credits)—*Prerequisite: DANC 2135*. Continuing development of technique in foxtrot, waltz, rumba, swing, and tango.

DANC 3150 Intermediate Tap Dance (2 credits)—*Prerequisite: DANC 2150*. Continuing development of tap dance technique.

DANC 3500 Dance as a Human Experience (3 credits)—This course involves the study of dance as a societal phenomenon. Students will examine the unique characteristics of dance and its various functions in society. Emphasis will be on dance in Western Civilization. However, materials will be included to the extent that they have influenced the development of dance in the West.

DANC 3505 Musical Theatre Dance (3 credits)—*Prerequisite: DANC 2125*. An exploration of the musical theatre dance styles as seen on Broadway.

DANC 3510 Dance History (3 credits)—An exploration of the history of dance from prehistory to the present.

DANC 3520 Dance Repertory for Performance (3 credits)—*Prerequisite: Permission of instructor through audition.* Preparation and presentation of repertory works for concert performance.

DANC 3525 Dance Improvisation (3 credits)—*Prerequisite: DANC 2105 or 2125*. An exploration of the process of improvisational movement.

DANC 3530 Dance Composition (3 credits)—*Prerequisite: DANC 3105 or 3125*. An exploration of the process of choreography.

DANC 4105 Advanced Ballet (3 credits)—*Prerequisite: DANC 3105*. Advanced technical training in the discipline of ballet dance.

DANC 4125 Advanced Jazz Dance (2 credits)—*Prerequisite: DANC 3125*. Advanced technical training in the discipline of jazz dance.

DANC 4130 Advanced Modern Dance (2 credits)—*Prerequisite: DANC* 3130. Advanced technical training in the discipline of modern dance.

DANC 4135 Advanced Ballroom Dance (2 credits)—*Prerequisite: DANC 3135*. Advanced technical training in fox trot, waltz, rumba, swing, and tango.

DANC 4150 Advanced Tap Dance (2 credits)—*Prerequisite: DANC 3150*. Advanced technical training in the discipline of tap dance.

Dental Hygiene
DHYG

DHYG 2020 Dental Anatomy and Histology (3 credits)—*Prerequisite(s): Acceptance in the Dental Hygiene curriculum or special department approva*l. An introduction to the embryology, histology, and morphology of the structures found within the oral cavity. Study will include physiologic function of oral structures, tooth identification, and normal variants of oral anatomy. Root morphology will receive special emphasis.

DHYG 2030 Pre-Clinical Dental Hygiene Lecture (3 credits)—*Prerequisite(s): Acceptance in Dental Hygiene curriculum or special departmental approval.* An introduction to the knowledge, responsibilities, and skills required by the dental hygiene therapist to provide oral health care.

DHYG 2031 Pre-Clinical Laboratory (3 credits)—*Prerequisite(s): Acceptance in Dental Hygiene curriculum or special departmental approval; Corequisite(s): In conjunction with DHYG 2500*. Clinical skills will be introduced on dental manikins. Resulting skills will be mastered on clinical lab partners with direct faculty supervision.

DHYG 2040 Dental Office Emergencies (2 credits)—*Prerequisite(s): Acceptance to dental hygiene program or special permission.* The study of medical emergencies, as it relates to the practice of dental hygiene.

DHYG 2050 Occupational Safety for Dental Health Care Workers (1 credit)—*Prerequisite(s): Acceptance in Dental Hygiene curriculum or special departmental approval.* A study of transmittable and acquired diseases and disorders associated with the practice of dental hygiene. The techniques and practices required to prevent such diseases will also be introduced.

DHYG 2060 Introduction to Dental Hygiene (1 credit)—*Prerequisite(s): Acceptance in Dental Hygiene curriculum or special departmental approval.* Lecture and group discussion regarding the history, professional, legal, and ethical aspects of dental hygiene. The course is intended to introduce the dental hygiene student to the field of dental hygiene and the practice of dentistry.

DHYG 2130 Dental Hygiene Clinical Seminar I (1 credit)—*Prerequisite(s): Acceptance in Dental Hygiene curriculum or special departmental approval.* To provide the dental hygiene student with the knowledge and skills required to treat the patient with special needs.

DHYG 2131 Dental Hygiene Clinical Practice I (4 credits)—*Prerequisite(s): Acceptance in Dental Hygiene curriculum or special departmental approval.* This course is a continuation of DHYG 2501, and provides a supervised clinical setting for dental hygiene students to practice and demonstrate acquired skills and concepts with patient care.

DHYG 2160 Periodontology (3 credits)—*Prerequisite(s): Acceptance in Dental Hygiene curriculum or special departmental approval.* The study of periodontics. Designed to prepare students for clinical practice including treatment of early periodontal diseases.

DHYG 2170 Dental Radiology (3 credits)—*Prerequisite(s): Acceptance in Dental Hygiene curriculum or special departmental approval.* A study of the use of radiography in dentistry. Emphasis is placed on the formation of radiation and the properties which affect the dental image, dental radiographic techniques, radiographic processing, radio biological health, and the evaluation of dental radiographs for dental disease.

DHYG 2171 Dental Radiology Laboratory (1 credit)—*Prerequisite(s): Acceptance in Dental Hygiene curriculum or special departmental approval.* Laboratory experience in processing procedures and the techniques necessary to expose both bisecting and paralleling technique full-mouth series, interproximal surveys, panoramic, occlusal, and extraoral radiographs.

DHYG 3010 Head and Neck Anatomy (2 credits)—*Prerequisite(s): Acceptance in Dental Hygiene curriculum or special departmental approval.* The study of head and neck anatomy as it applies to oral evaluation, radiographic interpretation, and dental hygiene treatment.

DHYG 3020 General and Oral Pathology (3 credits)—*Prerequisite(s): Acceptance in Dental Hygiene curriculum or special departmental approval.* An introduction to general and oral pathology focusing on those diseases that most frequently manifest in the oral cavity. Study will include etiology, clinical signs and symptoms, and treatment of diseases known to affect the oral cavity.

DHYG 3030 Dental Hygiene Clinical Seminar II (2 credits)—*Prerequisite(s): Acceptance in Dental Hygiene curriculum or special departmental approval.* The study of management skills essential to the contemporary dental hygiene practice including the use of computers in practice management.

DHYG 3031 Dental Hygiene Clinical Practice II (4 credits)—*Prerequisite(s): Acceptance in Dental Hygiene curriculum or special departmental approval.* Clinical Practice II is a continuum of previous clinical courses. Skills and concepts are refined and expanded.

DHYG 3100 Dental Hygiene Theory and Practice (5 credits)—*Prerequisite(s): Acceptance in Dental Hygiene curriculum or special departmental approval.* A study that will provide licensed dental hygienists the opportunity to evaluate current dental hygiene therapies, interpreting them for application in dental hygiene practice.

DHYG 3110 Dental Materials (2 credits)—*Prerequisite(s): Acceptance in Dental Hygiene curriculum or special departmental approval.* A study of the characteristics, physical properties, manipulation, uses, and care of materials used in the practice of dentistry and dental hygiene.

DHYG 3111 Dental Materials Laboratory (1 credit)—*Prerequisite(s): Acceptance in Dental Hygiene curriculum or special departmental approval.* Three-hour lab that includes demonstration, participation, and practice with accepted materials and techniques commonly utilized in dental hygiene practice.

DHYG 3120 Pharmacology for Dental Hygiene (3 credits)—*Prerequisite(s): Acceptance in Dental Hygiene curriculum or special departmental approval.* The study of pharmacology as it relates to dental hygiene practice.

DHYG 3130 Community Dental Health (3 credits)—*Prerequisite(s): Acceptance in Dental Hygiene curriculum or special departmental approval.* Survey of the theory and practice of dental public health, with emphasis on assessment, planning, implementation, and evaluation of community health problems. Includes the study of biostatistics, epidemiology, and their relationship to dental public health.

DHYG 3200 Issues in Dental Hygiene (1 credit)—*Prerequisite(s): Acceptance in Dental Hygiene curriculum or special departmental approval.* A study of dental and dental hygiene practice setting, legal and ethical issues, methods of procuring employment, compensation mechanisms, and types of insurance.

DHYG 4000 Dental Radiographic Interpretation (1 credit)—*Prerequisite(s): Acceptance in Dental Hygiene curriculum or special departmental approval.* A laboratory course introducing the dental hygiene student to the principles of radiographic interpretation of anomalies and the identification of normal anatomic landmarks.

DHYG 4010 Teaching Strategies for Allied Health (3 credits)—*Prerequisite(s): Acceptance in Dental Hygiene curriculum or special departmental approval.* A study of the basic principles of developing and implementing classroom presentations. Emphasis will be placed on the basics of the educational process, leading to the development of a dental health lesson plan for the dental hygienist.

DHYG 4020 Dental Hygiene Clinical Seminar III (1 credit)—*Prerequisite(s): Acceptance in Dental Hygiene curriculum or special departmental approval.* Utilization of current technology to research selected dental hygiene topics and prepare multimedia presentations.

DHYG 4021 Dental Hygiene Clinical Practice III (4 credits)—*Prerequisite(s): Acceptance in Dental Hygiene curriculum or special departmental approval.* Clinical Practice IV is a continuum of previous clinical courses. Skills and concepts continue to be refined and expanded.

DHYG 4030 Anesthesia and Pain Control (1 credit)—*Prerequisite(s): Acceptance in Dental Hygiene curriculum or special departmental approval.* This course provides theory and delivery techniques required to administer local anesthetics for pain control during dental hygiene therapies.

DHYG 4110 Supportive Periodontal Therapy (3 credits)—*Prerequisite(s): Acceptance in Dental Hygiene curriculum or special departmental approval.* The advanced study of periodontics, designed to prepare students for clinical practice including treatment of early periodontal diseases.

DHYG 4120 Dental Hygiene Clinical Seminar IV (1 credit)—*Prerequisite(s): Acceptance in Dental Hygiene curriculum or special departmental approval.* Methods used in biostatistical research will be reviewed in an effort to assist the dental hygiene students in the construction of instruments which collect valid and reliable data.

DHYG 4121 Dental Hygiene Clinical Practice IV (4 credits)—*Prerequisite(s): Acceptance in Dental Hygiene curriculum or special departmental approval.* Clinical Practice IV is a continuum of previous clinical courses Skills and concepts continue to be refined and expanded.

DHYG 4130 Geriatric Dental Hygiene (2 credits)—*Prerequisite(s): Acceptance in Dental Hygiene curriculum or special departmental approval.* An introduction to the special considerations of the segment of the geriatric population confined to long-term care facilities. Dental health education strategies will be incorporated to assist students' design and presentation of in-services to nursing home staff.

Digital Media

DIGM

DIGM 1100 Visual Thinking (4 credits)—An introduction to the problems, principles, and process involved in the ideation, conceptual design, and verbal/visual communication of media solutions. In this course students will learn to apply design thinking skills, rapid visualization techniques, and design process templates to define, design, and develop a comprehensive project proposal, product, and implementation plan. Fundamental to this course is the development of drawing skills using traditional media to thumbnail, draw, and diagram the information, visual interfaces, and user interactions associated with project/product design solutions. Lecture and lab. (fall, spring)

DIGM 1640 Vector-Based Imaging (4 credits)—*Prerequisite or corequisite: DIGM 1100; or permission of instructor.* Study of vector-based image production with particular emphasis on postscript illustration and communication. Both technical and design considerations that work to improve the student's ability to communicate graphically will be addressed. This class features a combination of graphic production projects, critiques, readings, and discussions. Lecture and lab. (fall, spring)

DIGM 1650 Raster-Based Imaging (4 credits)—*Prerequisite or corequisite: DIGM 1100; or permission of instructor.* Study of digital imaging and processing as related to modern industrial problems. Areas of study will include a review of historical methods of manipulating images compared with recent innovations in technology and the use of digital formats. Image design, color usage, and computer-based production of both traditional and digital publications will be studied. Lecture and lab. (fall, spring)

DIGM 2821 Desktop Publishing (4 credits)—*Prerequisite(s): DIGM 1100, ARTA 1110, DIGM 1640, DIGM 1650.* Study of history, basic processes, materials and methods of the graphic arts and communications industries with emphasis on methods of computer-based print production, typography, and layout. Lecture and lab. (fall, spring)

DIGM 2870 Animation Fundamentals (4 credits)—*Prerequisite(s): DIGM 1100, DIGM 1640, and ARTA 1201; or permission of instructor.* Study of the fundamental principles and mechanics of motion through hand-drawn animation. Students explore timing, spacing, and staging an image for clarity, gravity, emotion and storytelling, and learn to apply and manipulate the fundamental concepts to creatively animate an idea. The coursework will serve as a foundation for comprehending the underlying principles and mechanics for any form of animation. Lecture and lab. (fall, spring)

DIGM 2900 Motion Tools I: Editing (4 credits)—*Prerequisite(s): DIGM 1100, DIGM 1650 or permission of instructor.* Study of file-based digital video basics including basic compositing and an overview of the motion production process. Topics include pre-production, storyboarding, audio/video capture, editing of raw content into multi-layered final products, post-production processing of audio/video files for various delivery scenarios, and a review of historical motion picture and motion graphics production compared with recent technology innovations in the production process. Lecture and lab. (fall, spring)

DIGM 3000 Principles of Interaction (4 credits)—*Prerequisite(s): DIGM 1650, DIGM 1640, ARTA 1110 or permission of the instructor; Prerequisite(s) or Corequisite(s): ARTA 1204.* This course provides practical and theoretical knowledge in interactive development. Through lectures and studio application of the underlying interactive principles, the student will experience, and gain a comprehensive understanding of interactive project planning, media components, interactive delivery systems, information architecture, usability, user interface design, and interactive application development. Principles governing critical analysis of interactive content and graphical design will be emphasized. (fall, spring)

DIGM 3010 Principles of Visualization (4 credits)—*Prerequisite(s): DIGM 1640, DIGM 1650, ARTA 1110 or permission of the instructor; Prerequisite(s) or Corequisite(s): ARTA 1204.* This course provides practical and theoretical knowledge in visualization. Through lectures and studio application of the underlying principles, students will gain a comprehensive understanding of visualization as follows: modeling, lighting, surface rendering, animation, and digital video exporting. Lecture and lab. (fall, spring)

DIGM 3110 3-D Model Design (4 credits)—*Prerequisite(s): DIGM 3010, ARTA 1204 or permission of instructor.* Working with state-of-the-art software, this course provides an introduction to 3-D model design. Students will learn how to utilize modeling techniques and applications to gain a basic understanding of NURBS, polygon, and subdivision surfaces to design organized virtual models. Lecture and lab. (fall, spring)

DIGM 3120 3-D Lighting & Rendering (4 credits)—*Prerequisite(s): DIGM 3010, ARTA 1204, or permission of instructor.* This course provides a practical and theoretical understanding of lighting, rendering, and setting up cameras in a 3-D virtual environment. Students will learn how to utilize a number of texturing and mapping techniques, rendering applications, and gain a basic understanding of rendering effects, and specific output issues. Areas of emphasis include shading models, 2-D bitmap, and 3-D procedural texture types, solid and surface mapping types, and techniques for creating stylized and realistic textures. Lecture and lab. (fall)

DIGM 3130 3-D Animation (4 credits)—*Prerequisite(s): DIGM 3010 and DIGM 2870.* Study of 3-D as it relates to the basic principles of animation. Students will learn to create believable and natural animations using a combination of several different techniques including inverse kinematics (IK), forward kinematics (FK), bones, morphing, and key-framing. Lecture and lab. (spring)

DIGM 3200 Web Design (4 credits)—*Prerequisite(s): (Digital Media Majors) DIGM 3000, or permission of instructor; Prerequisites: (Other Majors) DIGM 1650, CSCI 1710, or permission of instructor.* This course provides a practical understanding of the knowledge and skills required of fine and applied visual artists in today's internet environment. Various interdisciplinary aspects will be considered. Emphasis will be on combining intermediate Web techniques with advanced design concepts to create sophisticated interface imagery and animations for the Web. Lecture and lab. (fall)

DIGM 3300 Product Design (4 credits)—*Prerequisite(s): DIGM 3110 or permission of instructor.* An introduction to the problems, principles, and processes involved in the ideation, conceptual design, and digital modeling of product design solutions. In this course students will learn about material characteristics, 3-D modeling techniques, and manufacturing methods, and be able to render, model, and design innovative product designs. Lecture and lab. (spring, even years)

DIGM 3400 Interactive Design (4 credits)—*Prerequisite(s): DIGM 2821, DIGM 3000, or permission of instructor.* This course is a study of the integration of components utilized in multimedia applications with authoring software. Students use industry standard software as a tool for producing interactive projects for CD-ROM, information KIOSK, DVD or Internet delivery. Students will learn the fundamentals of design for these platforms including interactive storytelling, navigation metaphors, technical constraints, and usability. Topics include but are not limited to basic animation techniques, transitions, user interactivity, basic scripting, interactive development process and usability. Efficiency and optimization of programs as well as usability and interface design will be emphasized. Lecture and lab. (spring)

DIGM 4018 Senior Honors Thesis (3 - 6 credits)—Open to those in university honor programs only. A capstone experience serving as the culmination of an honors curriculum.

DIGM 4146 Character Animation Laboratory (1 credit)—*Prerequisite(s): DIGM 2870, DIGM 3010, ARTA 1201, ARTA 1204; Corequisite(s): DIGM 4147.* This course will incorporate advanced-level laboratory exercises and explorations in character animation production. (spring)

DIGM 4147/5147 Fundamentals of Character Animation (3 credits)—*Prerequisite(s): DIGM 2870, DIGM 3010, ARTA 1201, ARTA 1204 or permission of instructor; Corequisite(s): DIGM 4146.* This course emphasizes the practical and theoretical principles of character animation. Students will explore how to put personality into characters and develop skills to create characters that act. The exercises will provide a foundation for comprehending the underlying techniques for capturing expression of emotions in animation. (spring)

DIGM 4400 Interactive Development (4 credits)—*Prerequisite(s): DIGM 3000, CSCI 1800, or permission of instructor.* This class goes beyond multimedia animation and design to explore interactive programming techniques including conditional statements, loops, subroutines, functions, operators, multi-level movie clips, properties, variables, game programming, and shockwave output. Students will build upon a solid understanding of interactive authoring to develop advanced multimedia applications. Lecture and lab.

DIGM 4616 Raster-Based Imaging Laboratory (1 credit)—*Prerequisite(s): DIGM 1650, ARTA 1204, or permission of instructor; Corequisite(s): DIGM 4617.* This course will incorporate advanced-level laboratory exercises and explorations in raster-based imaging and illustration. (spring)

DIGM 4617/5617 Advanced Raster-Based Imaging (3 credits)—*Prerequisite(s): DIGM 1650, ARTA 1204, or permission of instructor; Corequisite(s): DIGM 4616.* Study of advanced raster-based digital imaging and processing. Areas of study will include advanced methods for manipulating and compositing 2-D images, photo enhancement, and digital illustration. Customization of software tools for special effects, painting and image manipulation will be covered. Image design, concept development and creativity, and critical evaluation will be emphasized. (spring)

DIGM 4626 Motion Tools II Laboratory (1 credit)—*Prerequisite(s): DIGM 1650, DIGM 2900, DIGM 3010, or permission of instructor; Corequisite(s): DIGM 4627.* This course will incorporate advanced-level laboratory exercises and explorations in digital video compositing. (fall)

DIGM 4627/5627 Motion Tools II: Compositing (3 credits)—*Prerequisite(s): DIGM 1650, DIGM 2900, DIGM 3010, or permission of instructor; Corequisite(s): DIGM 4626.* This course covers techniques and theory concerning motion graphics and compositing for video. Instruction is designed to bridge the gaps between 3-D production rendering and final output, live action, and computer generated imagery. Work will be project-based and will provide students with short, demo-reel quality work. Though not required, skills in DVD authoring, vector-based imaging, and advanced 3-D skills are helpful. (fall)

DIGM 4636 Interaction Laboratory (1 credit) —*Prerequisite(s): DIGM 2900, DIGM 3400, and/or DIGM 4400, or permission of instructor; Corequisite(s): DIGM 4637.* This course will incorporate advanced-level laboratory exercises and explorations in interactive media production.

DIGM 4637/5637 Advanced Interaction Design (3 credits)—*Prerequisite(s): DIGM 2900, DIGM 3400, and/or DIGM 4400, or permission of instructor; Corequisite(s): DIGM 4636.* Scripting control programs on advanced digital media platforms to create interactive multimedia works comprising images, animation, digital audio and video. Students are expected to have some computer programming experience.

DIGM 4646 Animation Laboratory (1 credit)—*Prerequisite(s): DIGM 2870, DIGM 3010, ARTA 1201, ARTA 1204, or permission of instructor; Corequisite(s): DIGM 4647.* This course will incorporate advanced-level laboratory exercises and explorations in animation production.

DIGM 4647/5647 Advanced Animation (3 credits)—*Prerequisite(s): DIGM 2870, DIGM 3010, ARTA 1110, ARTA 1201, ARTA 1204, or permission of instructor; Corequisite(s): DIGM 4646. A study in advanced animation techniques.* Topics may include, but are not limited to, animation procedures with a focus on motion, timing and storytelling.

DIGM 4656 Web Design Laboratory (1 credit)—*Prerequisite(s): (Digital Media Majors) DIGM 3000, DIGM 3200, CSCI 1800, or permission of instructor; Prerequisite(s): (Other Majors) DIGM 1650, DIGM 3200 or CSCI 1710, and CSCI 1800 or CSCI 1250; with permission of instructor. Corequisite(s): DIGM 4657.* This course will incorporate advanced-level laboratory exercises and explorations in production for the Web.

DIGM 4657/5657 Advanced Web Design (3 credits)—*Prerequisite(s): (Digital Media Majors) DIGM 3000, DIGM 3200, CSCI 1800, or permission of instructor; Prerequisite(s): (Other Majors) DIGM 1650, DIGM 3200, or CSCI 1710; and CSCI 1250 or CSCI 1800; or permission of instructor. Co-requisite: DIGM 4656.* This course will familiarize the student with techniques used to create fully functional Web applications keeping the graphic design and usability in mind. Topics covered include the use of scripting objects, database interaction, session management, and advanced interface design. Emphasis will be placed on incorporating good development practices with front-end design considerations. In-class discussions and critiques are an essential part of this course.

DIGM 4666 Product Design Laboratory (1 credit)—*Prerequisite(s): DIGM 3300 or permission of instructor; Corequisite(s): DIGM 4667.* This course will incorporate advanced-level laboratory exercises and explorations in product visualization.

DIGM 4667/5667 Advanced Product Design (3 credits)—*Prerequisite(s): DIGM 3300 or permission of instructor; Corequisite(s): DIGM 4666.* An exploration of the problems, principles, and processes involved in the digital modeling, development, and delivery of product design solutions. In this course students will learn advanced modeling, animation, and surface evaluation techniques, and be able to model, move, and modify innovative product designs for engineering and experience outputs. Students will learn to design for the physical world (to model for manufacture and rapid prototyping), and for the virtual world (to model for marketing and interactive programs).

DIGM 4816 3-D Effects Animation Undergraduate Laboratory (1 credit)—*Prerequisite(s): DIGM 3130, DIGM 2900, or permission of*

instructor; Corequisite(s): DIGM 4817. This course will incorporate advanced-level laboratory exercises and explorations in 3-D effects animation. (fall)

DIGM 4817/5817 3-D Effects Animation (3 credits)—*Prerequisite(s): DIGM 3130, DIGM 2900, or permission of instructor; Corequisite(s): DIGM 4816*. This production course focuses on dynamic animation strategies to visualize physical phenomena. Students will explore rigid and soft bodies, particle animation, and rendering in both theory and practice. Additional topics include techniques involving instancing geometry with particle motion, basic fluid dynamics, cloth simulation, and dynamic constraints. (fall)

DIGM 4826 Motion Tool III Laboratory (1 credit)—*Prerequisite(s): DIGM 2900 or permission of instructor; Corequisite(s): DIGM 4827*. This course will incorporate advanced-level laboratory exercises and explorations in digital video production. (spring)

DIGM 4827/5827 Motion Tools III: Application (3 credits)—*Prerequisite(s): DIGM 2900 or permission of instructor; Corequisite(s): DIGM 4826*. A study of the computer as a tool for acquiring, editing and compositing a wide range of source media into high resolution video programs. (spring)

DIGM 4876 Modeling & Lighting Laboratory (1 credit)—*Prerequisite(s): DIGM 3110, DIGM 3120, or permission of instructor; Corequisite(s): DIGM 4877*. This course will incorporate advanced-level laboratory exercises and explorations in 3D modeling & lighting.

DIGM 4877/5877 Advanced Modeling & Lighting (3 credits)—*Prerequisite(s): DIGM 3110, DIGM 3120, or permission of instructor; Corequisite(s): DIGM 4876*. Topics include lighting effects, shadows, optimized rendering, and techniques for specification in all modeling paradigms.

DIGM 4886 Technical Direction Laboratory (1 credit)—*Prerequisite(s): DIGM 3130 or permission of instructor; Corequisite(s): DIGM 4887*. This course will incorporate advanced-level laboratory exercises and explorations in technical direction. (spring)

DIGM 4887/5887 Technical Direction for Animation (3 credits)—*Prerequisite(s): DIGM 3130 or permission of instructor; Corequisite(s): DIGM 4886*. This course will explore advanced digital character animation techniques. Course topics include character setup, inverse kinematics, joints and bones systems, deformers, scripting and set driven key set-up. There will be an emphasis on effective character set-up procedures and scripting workflow. (spring)

DIGM 4900 Independent Study in Digital Media (1-6 credits)—Individual students or groups of students define a problem and work under the direction of a faculty member. The problem must be approved by the department. Significant investigation and reporting required.

DIGM 4930 Portfolio Development for Digital Media (4 credits)—*Prerequisite(s): Senior status and within two (2) semesters of completing all requirements for graduation*. Permission of instructor is required. This course provides the opportunity to review and refine selected examples of work for the creation of a digital media portfolio. Topics include industry research, job searching techniques, interview preparation, group projects, presentation skills, and portfolio development and refinement. Lecture and lab. (fall, spring)

DIGM 4957/5957 Special Topics in Digital Media (2-4 credits)—Special Topics of current interest to groups of students concerning content not presented in regular course offerings. May be repeated for credit if material covered is significantly different or advanced. (fall, spring)

Developmental English
DSPW

DSPW 0800 Fundamentals of Composition (3 credits)—A course designed to help students develop essential skills for completing essay length assignments. This course concentrates on thematic organization, prewriting strategies, revising, editing, grammar, paragraphing, diction, and supporting a point. (The graduation requirement is increased by three credits for students enrolled in this course.)

Developmental Mathematics
DSPM

DSPM 0800 Elementary Algebra (3 credits)—Real numbers, linear equations and inequalities, formulas, functions and graphs, systems of linear equations, absolute value equations and inequalities. Real world applications are integrated throughout the course. (The graduation requirement is increased by three (3) credits for students enrolled in this course.)

DSPM 0850 Intermediate Algebra (3 credits)—Laws of exponents, polynomials, factoring, rational expressions, radicals, quadratic equations. Real world applications are integrated throughout the course. (The graduation requirement is increased by three (3) credits for students enrolled in this course.)

DSPM 0990 Plane/Analytical Geometry (3 credits)—A course designed to fulfill a high school deficiency in geometry. Points, lines, angles, polygons, circles, tangents, parallels, perpendiculars, surfaces, solids, and the Cartesian plane. The development of critical thinking skills is stressed. (The graduation requirement is increased by three (3) credits for students enrolled in this course.)

Developmental Reading
DSPR

DSPR 0800 Fundamental Reading (3 credits)—This course builds expertise in academic reading for university courses. Strategies taught in the course target the following: reading proficiencies, acquisition of general vocabulary and discipline-specific terminology, recognition and expression of superordinate and subordinate concepts, interpretation of an author's purpose, opinion, and tone, fluency in reading, thoughtful response to written information and narration, summarization, and research techniques. (The graduation requirement is increased by three credits for students enrolled in this course.) (fall, spring, summer)

Developmental Study Skills
DSPS

DSPS 0800 Learning Strategies (3 credits)—This course builds the student's personal and academic management skills through work with the following topics: university resources and services for students, time management, cultural diversity, social management, career planning, lecture notetaking, study strategies, test-taking concerns, and academic anxiety. (The graduation requirement is increased by three credits for students enrolled in this course.) (fall, spring, summer)

Early Childhood Education
ECED

ECED 2010 Healthy and Safe Environments for Young Children (3 credits)—A study of the basic principles of good health as they relate to the child in the family, childcare center, primary grade classroom, and the community. (fall, spring)

ECED 2110 Infant/Child/Toddler Development (3 credits)— An in-depth study of the physical, cognitive, and socio-emotional development of the child from birth through age eight. Development, care, and guidance of the child will also be examined in relationship to the various developmental theories. Family and other socialization agents will be explored. (fall, spring)

ECED 2150 Foundations of Early Childhood Development (3 credits)—An overview of early childhood development and services for young children and their families. Will include historical roots, societal changes, the needs of young children, program differentiation, and future trends. (fall, spring)

ECED 3140 Guiding Young Children (3 credits) — The student will develop the skills and techniques necessary in handling behavioral and disciplinary issues of the child from birth through age eight. Students will also create and design creative experiences and activities for children from birth through age eight in a variety of professional settings. (fall, spring)

ECED 3150 Creative Development of Young Children (3 credits)—Strategies for promoting the emergent creative dispositions of the young child are explored. Areas of focus include art, music, movement, play, dramatics, and creativity. Field participation is required. (fall, spring)

ECED 3160 Body/Brain-based Learning Environments (3 credits)—*Prerequisite(s): ECED 2010, ECED 3220.* The primary goals of the course are for students to learn about brain-based learning, physical development, emotional development, and the relationship between the body and brain and its impact on learning in the classroom. Various brain-compatible teaching strategies and activities will be explored. (fall, spring, summer)

ECED 3220 Designing Physical Environments (3 credits)—Students will learn how to design physical environments for young children focusing on play and the creation of effective learning centers for early childhood (Pre-K—3rd grade) classrooms. Licensing standards and environmental rating tools will be explored, as well as the impact that creativity and environmental influences have on learning. (fall, spring)

ECED 4010 Observing and Assessing Young Children (3 credits)—*Prerequisite(s): ECED 2110, ECED 2150, ECED 3140; Corequisite(s) for PreK-3 ECDV Student: Students must be enrolled in ECED 4150, 4161, and 4130.* This course will cover assessment for children from birth to eight years of age. Both formal and informal instruments will be discussed with the emphasis on tools which can be used by teachers of young children. Considerations in choosing, administering, and reporting results of assessments will also be addressed. Field work is required. (fall, spring)

ECED 4130 Professional Issues in Early Childhood Education (3 credits)—*Prerequisite(s): ECED 2010, ECED 2150, ECED 3140, ECED 4140; Corequisite(s): Students must be enrolled in ECED 4150, ECED 4161.* This course investigates current issues in early childhood education, including advocacy in early childhood, professionalism, ethics, and professional standards. This course also examines issues related to professional and teaching portfolios, with each student's work presented in an individual portfolio representing the learning that occurred during the early childhood program. (fall, spring)

ECED 4140 Program Development for Young Children (3 credits)—*Prerequisite(s): Students enrolled in this course must have completed ECED 2010 and ECED 3220.* This course will build on students' existing knowledge of the history of Early Childhood Education. It will introduce theories of learning and development with an emphasis on constructivist theory, which is central to our Early Childhood Program's philosophy. Class activities and field experiences allow students to develop an understanding of the relationship between these theories and developmentally appropriate practice. Early Childhood Curriculum Models (Pre-K—3rd grade), the role of the teacher, and the Code of Ethics for teaching will be explored. Candidates will learn about constructivist theory through readings, discussions, and practical application activities that will allow them to contrast this theory with other models of learning and development. (fall, spring)

ECED 4150 Literacy in Young Children (3 credits)—*Prerequisite(s): ECED 2110, ECED 2150, and ECED 3140; Corequisite(s) for PreK-3 ECDV Students: Students must be enrolled in ECED 4010, 4161, and 4130.* Examines the development of literacy during the early years, birth to eight. Includes the study of environmental influences and methods that enrich or delay emerging literacy and language. Group activities for early childhood programs are explored. Field participation in early childhood setting is required. Writing Intensive Course. (fall, spring)

ECED 4161 Curriculum Development for Young Children (3 credits)—*Prerequisite(s): ECED 2010,ECED 2150, ECED 3220, ECED 3140; Corequisite(s) for PreK-3 ECDV Students: Students must be enrolled in ECED 4150, 4010, and 4130.* This course analyzes children's thinking as it influences curriculum design in early childhood. It explores the educational needs of young children from ages 0 - 8 (Pre-K—3rd grade) in the cognitive realm of scientific, social, mathematical, and language learning. Field participation in early childhood settings is required. (fall, spring)

ECED 4167 Constructivist Inquiry Approach to Science and Math for Young Children (3 credits)—*Prerequisite: Admission to Teacher Education.* Teacher candidates will explore developmentally appropriate methods based on constructivist theory for promoting scientific and mathematical inquiry among children in early childhood settings. A field experience in an EC classroom will ground the learners' understanding. (fall, spring)

ECED 4257/5257 Mentoring in Early Childhood Education (3 credits)—This course is designed to train Early Childhood professionals in effective methods and principles of mentoring adults who have varying levels of training. Emphasis will be on the role of the mentor as a facilitator of adult learning. As leaders, these mentors will be implementing change that can lead to improved quality in programs and classrooms that serve young children, birth through eight years of age. (spring)

ECED 4347/5347 Technology and Media in Inclusive Early Childhood Education (3 credits)—This course provides a comprehensive overview of media and technology use in inclusive early childhood classrooms. This course is based on the theories of Piaget, Vygotsky, and Papert, which support experiential, hands-on learning in the context of social interactions. Theories, research studies, and application of new technology and media will be considered. The appropriateness of technology use, along with application of new technology and media for children ages birth through age eight will be reviewed. (fall, spring, summer)

ECED 4357/5357 Management and Administration of Early Childhood Programs (3 credits)—Operational planning and administration for supervisors, administrators, and directors of programs for young children in public and private schools. Emphasis is placed on the director's role in staff recruitment, hiring, development, and evaluation. Leadership and management techniques are also studied and evaluated. (spring)

ECED 4417/5417 Curriculum Development for Young Children (3 credits)—*Prerequisites: ECED 4140; admission to Teacher Education.* Curriculum development analyzes children's thinking as it influences curriculum design (lesson planning and unit development) in early childhood in the classrooms. Hands-on experiential activities will be emphasized to enhance the adult learners' understanding of Early Childhood social studies curriculum and the importance of meeting the national and state standards for social studies education, while also providing concrete examples for application with young children. Field participation in early childhood settings is required. (fall, spring)

ECED 4517/5517 Family, School, Community Involvement (3 credits)— Theoretical models of home-school relations will be examined as they have evolved through the 20th - 21st centuries. Strategies for initiating and maintaining effective home-school-community collaboration will be identified with special emphasis on benefits to parents, children, community, and school personnel. (fall, spring)

ECED 4580 Student Teaching in Early Childhood Education (PreK—3) (6 credits)—A supervised 15-week supervised experience in approved Early Childhood Pre-K and primary grade programs. Seminars will be held to coordinate and evaluate the student teaching experience. (fall, spring)

ECED 4581 Seminar in Student Teaching in Early Childhood Education (3 credits)—*Prerequisite(s): Students must be admitted to Teacher Education; Corequisite(s): Taken in conjunction with student teaching (ECED 4580.)* The seminar is designed to provide input, feedback, and support for students during their student teaching experience. Formal and informal assessment of students in the classroom, student teaching reflections, curriculum planning and implementation, observation of other classroom environments, home visitations with students during student teaching, and general discussion of the student teaching experience will be part of this course. (fall, spring)

Economics
ECON

Note: All students enrolling in upper-division, 3000-4000 level, College of Business and Technology courses must have junior or senior standing.

ECON 1050 Economics and Society (3 credits)—An examination of economics and its relationship to current issues and other social sciences. This course will examine the major components of the nation's economic systems, how they relate to political and other institutions, and their impact upon the national heritage, international relations, and current events. (fall, spring, summer)

ECON 2070 Quantitative Methods for Business I (3 credits)—*Prerequisite(s): MATH 1530.* Prepares students in the quantitative methods and data analysis methods commonly used in business with an emphasis on business applications utilizing methodologies such as fundamental algebra, systems of linear equations, differentiation, optimization, and business applications of probability and statistics. (fall, spring, summer)

ECON 2080 Quantitative Methods for Business II (3 credits)—*Prerequisite: ECON 2070.* This course advances the quantitative sequence begun by MATH 1530 and ECON 2070 by presenting more advanced topics in statistical inference analysis of variance, nonparametric statistics, regression and correlation, index numbers, and time series analysis as these topics relate to business decisions. (fall, spring, summer)

ECON 2210 Principles of Economics I (3 credits)—An introduction to macroeconomic analysis which concentrates on economy-wide systematic issues such as inflation, unemployment, and the level of economic activity. (fall, spring, summer)

ECON 2220 Principles of Economics II (3 credits)—A study of economics which concentrates on micro-theoretical concepts such as pricing, consumer choice, business production, and profit decisions. (fall, spring, summer)

ECON 3030 Microeconomics: Theories of Business Behavior (3 credits)—*Prerequisite(s): ECON 2070, ECON 2210, and ECON 2220.* An exposition of price theory and its applications. (spring)

ECON 3040 Macroeconomics: Analysis and Policy (3 credits)—*Prerequisite(s): ECON 2070, ECON 2210, and ECON 2220.* Determination of the aggregate level of income, employment, and price. An examination of economic policy fiscal policy, monetary policy, and income policy, as related to problems of inflation, recession, and economic growth. (fall)

ECON 3088 Research Methods and Statistics - Honors (3 credits)—*Prerequisite: ECON 2080; by permit only.* The student will obtain an understanding of the process used in conducting business research and its place in the development of sound business policy. Research methods will include the scope of business research, problem identification, hypothesis testing, data analysis, and survey research. Statistical analysis topics include chi-square tests, Z and T tests, analysis of variance, regression and correlation, and nonparametric methods. Students will be expected to appoint members to their honors thesis committee and to prepare and present their thesis research proposal as part of the course requirements. (spring)

ECON 3310 Monetary Economics (3 credits)—*Prerequisite(s): ECON 2210 and ECON 2220.* Functions of the monetary systems of the American and international economies and their influence on economic activity. (fall, spring)

ECON 3700 History of Economic Concepts (3 credits)—*Prerequisite(s): ECON 1050 or ECON 2210/2220, and declared major.* A study of the development of economic theory from Adam Smith to the present day. (fall)

ECON 4018 Senior Honors Seminar (3 credits)—*Prerequisite(s): ECON 3088 and admission to the College of Business and Technology Honors Program; by permit only.* A seminar for College of Business and Technology honors students who are working on senior honors theses or other approved projects. Upon successful completion of the course, students will have demonstrated the ability to complete the research process by creating a written product suitable for submission to the College of Business and Technology faculty. (offered on individual basis)

ECON 4317/5317 Health Care Economics (3 credits)—*Prerequisite(s): ECON 2220 or prior approval needed.* An overview of the economics of the health care industry. Topics include the production and pricing of health, the demand and supply of medical care and health insurance, the markets for physician and hospital services, health manpower, medical education, and the role of government and legislation in health care. (spring)

ECON 4327/5327 Labor Economics (3 credits)—*Prerequisite(s): ECON 2210 and ECON 2220.* Theoretical and real world operations of labor markets and labor relations systems in the United States, Europe, and Japan, including the role of labor unions, major issues in labor relations such as labor law reform, wage inequality, and employment discrimination.

ECON 4337/5337 Government Finance and Public Choice (3 credits)—*Prerequisite(s): ECON 2210 or ECON 1050.* The economic functions of government in a market-oriented economy. How governments allocate expenditures according to the preferences of individuals that comprise society. How governments raise money to finance their expenditures. (fall)

ECON 4447/5447 Urban and Regional Economics (3 credits)—*Prerequisite(s): ECON 2210 and ECON 2220; or consent of instructor.* An examination of the theories of urban and regional economic growth and development. (spring)

ECON 4457/5457 Industrial Organization and Regulation (3 credits)—*Prerequisite(s): ECON 2210 and ECON 2220.* An overview of the structure and performance of the United States economy. Review and evaluation of public policies adopted to improve economic performance, such as antitrust and public utility regulation. Current issues include competitiveness, deregulation, high technology, and foreign competition.

ECON 4527/5527 International Economics (3 credits)—*Prerequisite(s): ECON 2210 and ECON 2220.* Economic specialization and international trade and investment. The growth of the global economy and economic integration, the gains and losses to consumers and producers, Government policies to promote and/or restrict international business activities, and the role and operation of the international financial system. The rise of multinational companies and global markets. (fall)

ECON 4610 Managerial Economics (3 credits)—*Prerequisite(s): ECON 2080, ECON 2210, and ECON 2220.* Application of economic theory and statistics to various business and economic problems facing the management of a firm. Major topics include economic forecasting, demand analysis, cost analysis, pricing, investment decisions, and linear programming. This course is mathematically oriented. (spring)

ECON 4900 Independent Study in Economics (1-3 credits)—Designed for advanced students who, under the direction of an economics faculty member, wish to engage in independent research or an intensive study of subjects not covered in other available courses. Prior departmental and college approval is needed. (offered on an individual basis)

ECON 4905 Economics Internship (3 credits)—*Prerequisite(s): Completion of a minimum of 6 credit hours in upper-division level courses within the student's major; junior or senior standing; and a 2.7 (minimum) GPA.* Students are selected through a competitive process for assignments in approved business or public-sector organizations as interns under the supervision of the internship coordinator and field placement supervisors. Students may not earn more than three semester credits for this course, which can be used as a free elective or an elective within a business major with prior approval by the chair. (offered on an individual basis)

ECON 4957/5957 Topics in Economics (1-6 credits)—*Prerequisite(s): Senior or graduate standing; and permission of instructor.* This course gives students an opportunity to study special problems and new developments in the field of economics. (offered on an individual basis)

Foundations of Education

EDFN

EDFN 2100 Orientation to the Profession of Education (1 credit)—This course will provide the student interested in the teaching profession with an overview of the opportunities, problems, and realities of teaching. Students will learn about matters concerning the requirements that must be met in order to complete the teacher education program at ETSU. (fall, spring)

EDFN 2300 Foundations for Teaching (2 credits)—*Prerequisite(s): EDFN 2100, clearance through a Background Check, and students must have met*

one of the state mandated test score requirements. This course is an introduction to the roles of the professional teacher, teaching as a career, and the teaching/learning process. Particular attention will be given to educating teachers as leaders for the 21st century. Field experience is required, 12 hours. (fall, spring)

EDFN 3301 Issues in Education (3 credits)—*Prerequisite(s): EDFN 2100 and EDFN 2300 or ECED 2150.* Foundation of Early Childhood (if appropriate). Students must also be admitted to the Teacher Education Program prior to enrolling in this course. Issues in education are examined in the context of historical, philosophical, and sociocultural foundations of teaching. Issues of gender, social class, and ethnicity are discussed. Field experience is required. (fall, spring)

EDFN 4581 Seminar in Education (3 credits)—*Corequisite(s): Enrollment in Student Teaching.* This seminar is designed to address issues of importance to student teachers. Seminar participants will focus on issues such as formal and informal assessment for instructional and motivational purposes, classroom management and discipline, skills in observing, analyzing, critiquing teaching for improvement, and practical application of principles to specific routine and non-routine situations in K-12 classroom. Field assignments will be completed during student teaching. (fall, spring)

English
ENGL

(See Developmental Studies for below college-level courses)

Note: ENGL 1010 and 1020 or their equivalents are prerequisites for all English courses at the 2000 level and above.

***ENGL 1006 English as a Second Language (3 credits)**—International students may enroll in this sequence rather than in ENGL 1010-1020. English taught as a second language. Emphasis on composition, grammar, and comprehension of college-level texts. Students must earn a grade of "*C*" or above to pass this course.

***ENGL 1007 English as a Second Language Laboratory I (1 credit)**—Emphasis on pronunciation, classroom listening skills, and English conversation. This laboratory is a companion course for ENGL 1006. Students must earn a grade of "*C*" or above in this class to pass this course.

***ENGL 1008 English as a Second Language (3 credits)**—International students may enroll in this sequence rather than in ENGL 1010-1020. English taught as a second language. Emphasis on composition, research, and comprehension of college-level texts. Students must earn a grade of "*C*" or above to pass this course.

***ENGL 1009 English as a Second Language Laboratory II (1 credit)**—Emphasis on pronunciation, classroom listening skills, and English conversation. This laboratory is a companion course for ENGL 1008. Students must earn a grade of "*C*" or above to pass this course.

***ENGL 1010 Critical Reading and Expository Writing (3 credits)**—Writing paragraphs and essays based on close readings of various texts, with an emphasis on clear, grammatically correct expository prose. Students must take this course during the first eligible semester at the university. Students must earn a grade of "C" or above to pass this course.

***ENGL 1018 Honors Composition I (3 credits)**—*Prerequisite(s): ACT score of 25 or permission of the English Honors Director.* Writing essays based on critical reading of various texts, presupposes basic competency in grammar, mechanics, and organizational skills. Develops advanced degrees of stylistic and formal fluency and critical sophistication. Students must earn a grade of "C" to pass this course.

***ENGL 1020 Critical Thinking and Argumentation (3 credits)**—*Prerequisite(s): ENGL 1010 or equivalent.* Writing essays based on critical analyses of various literary texts. Emphasis on sound argumentative techniques. Requires documented research paper. Students must earn a grade of "C" or above to pass this course.

***ENGL 1028 Honors Composition II (3 credits)**—*Prerequisite(s): ENGL 1010, ENGL 1018 or equivalent; and permission of the English Honors Director.* Writing essays based on critical analyses of various literary texts. Emphasis on sound argumentative techniques and a documented research paper. Students are expected to exhibit stylistic fluency and organizational sophistication. Students must earn a grade of "C" to pass this course.

ENGL 2030 Literary Heritage (3 credits)—*Prerequisite(s): ENGL 1010 and ENGL 1020; or equivalent.* Satisfies requirement for 3 hours in the "Heritage" area of familiarity but does not meet requirements for a major or minor in English. An introduction to literature revolving around the theme of heritage, particularly as heritage is illustrated in Western and Non-Western culture through short fiction, poetry, and drama.

ENGL 2110 American Literature I (3 credits)—*Prerequisite(s): ENGL 1010 and ENGL 1020; or equivalent.* Survey of important American writers from Colonial times through the Civil War.

ENGL 2120 American Literature II (3 credits)—*Prerequisite(s): ENGL 1010 and ENGL 1020; or equivalent.* Survey of important American writers from 1865 to the present.

ENGL 2138 Honors Survey of American Literature (3 credits)—*Prerequisite(s): ENGL 1010 and ENGL 1020; or Honors equivalent.* Open only to those in English Honors or with permission of the English Honors Director. A broad survey of American literature from Colonial times to the present.

ENGL 2210 British Literature I (3 credits)—*Prerequisite(s): ENGL 1010 and ENGL 1020; or equivalent.* Survey of major British writers from Anglo-Saxon Period through 18th century.

ENGL 2220 British Literature II (3 credits)—*Prerequisite(s): ENGL 1010 and ENGL 1020; or equivalent.* Survey of major British writers from the Romantic Period to the present.

ENGL 2238 Honors Survey of British Literature (3 credits)—*Prerequisite(s): ENGL 1010 and ENGL 1020; or Honors equivalent.* Open only to those in English Honors or with permission of the English Honors Director. A broad survey of English literature from Beowulf to the present.

ENGL 2330 World Literature (3 credits)—*Prerequisite(s): ENGL 1010 and ENGL 1020; or equivalent.* Various genres from such non-European cultures as early Middle East, Asian, African, and Latin American.

ENGL 2338 Honors Survey of World Literature (3 credits)—*Prerequisite(s): ENGL 1010 and ENGL 1020; or Honors equivalent.* Open only to those in English honors or with permission of the English Honors Director. A broad survey of literature from non-European cultures.

ENGL 2430 European Literature (3 credits)—*Prerequisite(s): ENGL 1010 and ENGL 1020; or equivalent.* Various genres from ancient texts and European literature which form the basis of Western heritage in literature and many of the arts.

ENGL 2438 Honors Survey of European Literature (3 credits)—*Prerequisite(s): ENGL 1010 and ENGL 1020; or Honors equivalent.* Open only to those in English honors or with permission of the English Honors Director. Various genres from European literature which form the basis of Western heritage.

ENGL 3010 Poetry (3 credits)—Study of poetry as a genre with attention to its form and techniques. Reading and analysis of poems written by acknowledged masters of the genre.

ENGL 3020 Fiction (3 credits)—Course focuses on fiction as genre, with emphasis on technique and form in fiction, such as style and point of view. Readings include masters of both the short story and novel.

ENGL 3030 Drama (3 credits)—Study of drama as a genre with attention to its development and techniques. Readings and analysis of plays written by acknowledged masters of the genre.

ENGL 3040 Literary Nonfiction (3 credits)—Special attention to the history and forms of the essay. Subgenres covered may include autobiography and memoir, history as literature, travel writing, and reportage and journalism.

ENGL 3050 Literature and the Environment (3 credits)—This course will focus on nature and environment as theme and subject in literature. Students will read and write about a range of fiction, literary nonfiction, and poetry. Readings may also include academic essays about environmental history and ethics.

ENGL 3065 Southern Appalachian Literature (3 credits)—Prerequisite(s): ENGL 1010 and 1020. Survey of Southern Appalachian literature from the eighteenth century to the present.

ENGL 3070 Native American Literature (3 credits) — Survey of Native American literature from its beginnings in the oral tradition to today's written and cinematic works.

ENGL 3100 Introduction to Linguistics (3 credits)—The nature of language and different approaches to languages in various disciplines, such as psychology, sociology, computer linguistics, and speech pathology.

ENGL 3118 Honors Literature Focus (3 credits)—*Prerequisite(s): ENGL 2138, ENGL 2238, ENGL 2338, or ENGL 2438*. Open only to those in English Honors or with permission of the English Honors Director. Concentration on an area of literature studied more generally in one of the honors survey courses. Content will vary.

ENGL 3128 Honors Special Topics (3 credits)—*Prerequisite(s): ENGL 2138, ENGL 2238, ENGL 2338, or ENGL 2438*. Open only to those in English Honors or with permission of the English Honors Director. Study of special topics associated with the discipline of English. Content will vary. May be repeated for credit when content changes.

ENGL 3130 Advanced Composition (3 credits)—Skills of exposition with emphasis on traditional grammatical principles, and methods of organizing reviews, articles, and sketches.

ENGL 3134 Computers, Writing, and Literature (3 credits)—An introduction to uses of computers in writing and literature, including document design and publishing on computers, interactive fiction and poetry, and Internet resources for literary study.

ENGL 3141 Creative Writing I (3 credits)—*Prerequisite(s): ENGL 1010 and ENGL 1020 or equivalent; and one 2000-level literature course.* An introduction to creative expression in a single genre, such as fiction, poetry, or drama. May be repeated for credit when content changes.

ENGL 3150 Literature, Ethics, and Values (3 credits)—*Prerequisite(s): ENGL 1010 and ENGL 1020 or equivalent.* Readings and discussions which reveal ethics and values in literature, including contexts of philosophy, history, and art. Designed to enable students to form their own ethical positions and social values.

ENGL 3200 History of the English Language (3 credits)—Study of the development of the English language from origins with attention to phonological analysis and the dynamics of change in language.

ENGL 3270 Literature of Popular Culture (3 credits)—Selected topics in popular culture. supernatural, detective fiction, Westerns, etc.

ENGL 3280 Mythology (3 credits)—Classical mythology and myths from other cultures and relation of myth to literature, psychology, and popular culture.

ENGL 3290 Introduction to Film (3 credits)—The techniques and aesthetics of cinema, studied through presentation of feature and short film.

ENGL 3300 Literary Criticism (3 credits)—Theories of literature and criticism. Application of major theories to selected works.

ENGL 3400 Survey of African American Literature (3 credits)—Survey of literature ranging from slave narratives to contemporary works by African American writers, with particular attention to cultural influence and inspiration.

ENGL 3500 Women Authors (3 credits)—Study of significant women writers, including essayists, and how their works address gender issues.

ENGL 3650 American Folklore (3 credits)—Folklore as a basic element in the understanding of American culture and literature.

ENGL 3700 The Bible as Literature (3 Credits)—An introduction to the literary genres employed (e.g., narrative, lyric poetry, proverbs, apocalyptic writing) and the Bible's unique place in English and world literary heritage.

ENGL 4008 Honors Shakespeare (3 credits)—*Prerequisite(s): ENGL 3118 and ENGL 3128*. Open only to those in English Honors Program. Study of selected poems and plays by Shakespeare.

ENGL 4010 British Novel (3 credits)—Study of the development of the British novel from beginnings until present, usually including DeFoe, Austen, Dickens, Eliot, among others.

ENGL 4012 American Novel (3 credits)—A survey of representative American novels from the nineteenth century to the present.

ENGL 4017/5017 Children's Literature (3 credits)—History, genres, methods of presentation, emphasis on sources of criticism, and bibliography.

ENGL 4018 Honors Thesis (1-6 credits)—Open only to those in English Honors Program. Directed research in an approved topic. Required for departmental honors.

ENGL 4020 British Poetry (3 credits)—Study of the development of British Poetry by major contributors to the genre, with attention to various forms and poetic techniques.

ENGL 4022 American Poetry (3 credits)—Study of the development of American poetry from colonial times to the present.

ENGL 4030 Modern Drama (3 credits)—Representative writers of the Modern Era includes O'Neill, Williams, Synge, Shaw, Eliot, Beckett, and Osborne.

ENGL 4032 African Literature (3 credits)—Short stories, novels, poetry, and drama of African writers includes translations, as well as works written in English.

ENGL 4040 Modernism and Postmodernism (3 credits)—Readings in Modern and Postmodern literature, including fiction and poetry. May include drama, performance and cross-genre experimentation. Focus on works written in English but may include some works in translation.

ENGL 4047/5047 Special Topics in African American Literature (3 credits)—Focus on central issues addressed by African American Literature, with emphasis on such topics as "The Harlem Renaissance," African American Autobiography and Bildungsroman.

ENGL 4057/5057 Writing: Theory and Teaching (3 credits)—An examination of current theory and research in composition and pedagogical techniques.

ENGL 4077/5077 Literature for Adolescents (3 credits)—Wide reading, evaluation, and selection of literature appropriate to persons from the age of 12 to 18.

ENGL 4087/5087 Themes in Women's Literature (3 credits)—Studies of themes and issues affecting women as portrayed in selected fiction, poetry, and drama.

ENGL 4100 Writing in the Professions (3 credits)—Study of and practice in writing appropriate to professional settings reports, proposals, and letters, including conventions of electronic discourse.

ENGL 4117/5117 Grammar and Usage (3 credits)—Study of practical aspects of English syntax, semantics, and usage. Emphasis on the teaching of grammar and usage for those seeking teacher certification.

ENGL 4120 Descriptive Linguistics (3 credits)—The nature of language through the framework of descriptive linguistics with emphasis on the role of phonology, morphology, and syntax in language systems.

ENGL 4130 Sociopsychology of Language (3 credits)—Study of various principles that govern the way language is used, with attention to mental processes involved in language use.

ENGL 4137/5137 Dialectology (3 credits)—Study of regional and social language variations including dialect geography and sociolinguistics. Emphasis on linguistic features of Appalachian dialects.

ENGL 4200 Shakespeare and His Age (3 credits)—Course emphasizes Shakespeare's drama, including selections from tragedies, histories, and comedies, with some attention to his contemporaries, such as Marlowe and Johnson.

ENGL 4207/5207 Literature of the South (3 credits)—Significant works of Southern writers including Simms, Faulkner, Warren, Wolfe, and Welty.

ENGL 4217/5217 Irish/Scottish Literature (3 credits)—Study of major writers in Irish and Scottish literature with attention to folklore and culture.

ENGL 4237/5237 Scots-Irish and Scots in Appalachia (3-6 credits) — This course, offered even-numbered summers on the ETSU campus, examines the contribution of the Scots-Irish and Scots to Appalachian culture.

ENGL 4290 Film Genres (3 credits)—A genre approach, including but not limited to, comedy, Western, film noir, and documentary. May be repeated for credit when content varies.

ENGL 4320 Film Criticism (3 credits)—Explores various critical approaches to film, including textual, genre, auteur, scholarly, and specialized. Emphasizes students' written expression of their own evaluations.

ENGL/APST 4337/5337 Appalachia in Scotland (3-6 credits)—This course will survey the relationship among Appalachian, Scottish, and Irish cultures, with an emphasis on Scotland and Ireland.

ENGL 4340 Topics in Film (3 credits)—Selected film topics not included elsewhere in course offerings such as sports films, African-American films, and films of Appalachia. May be repeated for credit when content varies.

ENGL 4417/5417 Teaching English in Secondary Schools (3 credits)—*Prerequisite(s): Admission to Teacher Education.* Instruction in the methods and materials to be used by English teachers in secondary schools. Counts as professional education credit. Fall

ENGL 4507/5507 Literature in Film (3 credits)—Film adaptations of significant literary works.

ENGL 4690 Milton and His Age (3 credits)—Paradise Lost, Paradise Regained, Samson Agonistes, and selected short poetry. Examination of Milton's role as artist and thinker in his time and in the modern world.

ENGL 4700 Chaucer and Medieval Literature (3 credits)—*The Canterbury Tales* and other selections from the period.

ENGL 4857/5857 Technical Writing (3 credits)—Course emphasizes organization and presentation of technical material through effective applied writing, such as use of graphics, indexing, storyboarding, etc.

ENGL 4896 Studies in English (3 credits)—Study in selected topics/themes in literature.

ENGL 4907/5907 Creative Writing II: Fiction (3 credits)—*Prerequisite(s): ENGL 3141 or permission of the instructor.* Advanced course in writing of fiction. Considerable attention to craft and form of stories written by acknowledged masters of genre.

ENGL 4917/5917 Creative Writing II: Poetry (3 credits)—*Prerequisite(s): ENGL 3141 or permission of the instructor.* Advanced course in writing of poetry. Considerable attention to craft and form of poems written by acknowledged masters of the genre.

ENGL 4957/5957 Topics in English (1-6 credits)—Selected topics in the discipline. Can be repeated for credit when content changes.

ENGL 4989 Internship/Cooperative Education (1-3 credits)—Students must clear arrangements through the Cooperative Education office prior to registration. Only six credits allowed as part of major requirements. Planned and supervised work in business, industry, and government agencies. Students may alternate between periods (usually two semesters) of full-time study and employment with a C E employer. Credit received carries full academic value, and students receive compensation as full-time employees.

**These courses do no assign grades C-, D+, or D.*

Technology

ENTC

ENTC 1038 Honors Orientation Seminar (1 credit)—*Prerequisite(s): Admission to College of Business and Technology or University Honors Program.* This course will fully orient the student to the College expectation for an honors student. Discussion and activities will relate to preparation for academic success and developing information technology skills. (fall)

ENTC 1110 Engineering Drawing (4 credits)—Technical communication including geometric construction, orthographic projection, auxiliary and section views, and pictorials with emphasis on sketching. Lecture and lab.

ENTC 1120 Manufacturing Processes and Specification (3 credits)—*Prerequisite(s): ENTC 1110 or equivalent*. The study of manufacturing processes and development of engineering documentation with particular emphasis on size specification and information processes required in a modern manufacturing environment and the physical processes involved in the manufacture of goods. Lecture (spring)

ENTC 1510 Student in University (2 credits)—This course is meant to provide guidance to first-year university students as they begin their search for directions to take in self-definition, intellectual growth, career choices, and life skills. (fall, spring)

ENTC 1600 Introduction to Technology Education (3 credits)—A study of the technological processes central to communication, manufacturing, construction, transportation, and biotechnical systems. An analysis of the discipline of technology through its equipment, processes, products, problems, and the interrelationships of technological systems and our environment. Lecture and lab.

ENTC 1610 Woodworking Technology (3 credits)—Woodworking technology is an introductory-level course in woodworking and wood technology with a primary thrust on the development of both cognitive and manipulative aspects related to tools, materials, and processes found in modern wood-related industries. Stresses safety, construction techniques, and a study of allied occupations. Extensive laboratory experience will allow the student the opportunity to design and construct objects using wood and wood products. Lecture and lab. (spring)

ENTC 2038 Honors Professional Ethics (3 credits)—*Prerequisite(s): Admission to College of Business and Technology or University Honors Program; and sophomore standing.* A case-study approach to basic ethical issues likely to confront engineers, computer scientists, and family and consumer scientists in their professional practices.

ENTC 2160 Architectural CADD (3 credits)—An introduction to the principles of architectural computer-aided drafting. In doing so, the course will analyze residential and commercial floor plans for design flaws and redesign or reverse engineer a better plan using CAD tools and develop a justification and defend decisions made. The course will also involve manipulating 2D and 3D models. (fall, spring, summer)

ENTC 2170 CADD (Computer Aided Design Drafting) (4 credits)—Fundamentals of engineering drawing and sketching: orthographic projections, dimensioning, tolerancing, and scaling. Introduction to the CAD interface and environment; 2D drawing basics; using object snaps, layers, blocks, dimensioning; introduction to 3D modeling; extrusions, revolves, and rendering. (fall, spring, summer)

ENTC 2200 Machine Tool Technology (4 credits)—*Prerequisite(s): ENTC 2170 and MATH 1720*. The use of metalworking machine tools and accessories including the mill, lathe, saw, drill press, and surface grinder with emphasis on safety, precision measuring tools, and hand tools. Machining characteristics of commonly machined metals, cutting speeds, and feed rates. Cutting tool types, geometry, and applications. Lecture and lab. (fall)

ENTC 2310 Electrical Principles (4 credits)—*Prerequisite(s): MATH 1720.* Introduction to electricity, DC circuits, power, DC meters, conductors, insulators, capacitance, magnetism, and electromagnetic

induction AC circuits, reactance, impedance, AC power, power factor, and resonance. Lecture and lab. (fall, spring)

ENTC 2320 Electronics I (4 credits)—*Prerequisite(s): ENTC 2310, MATH 1840*. Devices, rectification, filters, voltage regulation, characteristic curves, graphical analysis of amplification, amplifier configurations, amplifier equivalent circuits, gain equations, static and dynamic load lines, and biasing. Lecture and lab. (fall, spring)

ENTC 2330 Network Systems (3 credits)—*Prerequisite(s): ENTC 2310*. An introduction to network hardware. Both wire and wireless systems will be examined. Hardware for LAN and WAN systems will be examined.

ENTC 2410 Construction Fundamentals (4 credits)—Introduction to construction materials and systems. Emphasis on interpreting building prints and the analysis of materials of construction. Lecture and lab. (fall, spring)

ENTC 2420 Residential and Commercial Planning (4 credits)—*Prerequisite(s): ENTC 2410*. An outline study of architectural styles. The design of an original residential or commercial building developed through consideration of site conditions, space requirements, and adaptability of materials. Student will develop plans and a model. Lecture and lab. (fall, spring)

ENTC 2440 Mechanical Systems (4 credits)—*Prerequisite(s): ENTC 2420; Corequisite(s): PHYS 2010/11*. A study of the terminology and methods associated with commercial HVAC (heating, ventilation, air conditioning, and cooling) and plumbing systems. Detailed exercises will be employed in the design of simple systems with emphasis on appropriate equipment types and sizes. Lecture and lab. (spring)

ENTC 2989-99 Internship/Cooperative Education (1-3 credits)

ENTC 3010 Statics and Strength of Materials (4 credits)—*Prerequisite(s): PHYS 2010/11; Corequisite: MATH 1850*. The study of forces and their affects on statically determinate structures including a study of shear, moment and thrust diagrams, stresses and combined stresses, and properties of materials. Lecture and lab. (fall, spring)

ENTC 3020 Technology and Society (3 credits)—*Prerequisite(s): ENGL 1020*. How does technology impact society and one's daily life? Historical aspects of the development of technology beginning with Stone Age peoples through the Industrial Revolution, to modern concepts. An atmosphere where group discussions struggle with some of the dilemmas of modern life. (fall, spring, summer)

ENTC 3030 Technical Communication (3 credits)—*Prerequisite(s): ENGL 1010 and ENGL 1020*. A comprehensive study of technical and professional communication in written and oral form. Covers rhetorical principles and their application in a variety of types of business correspondence, reports, and technical/scientific documents. Lecture and classroom exercises. (fall, spring, summer)

ENTC 3048 Honors Methods of Research (3 credits)—*Prerequisite(s): Admission to College of Business and Technology or University Honors Program*. Analysis of the materials and methods of research appropriate to Applied Science and Technology.

ENTC 3240 Engineering Materials and Testing (4 credits)—*Prerequisite(s): ENTC 2200 and CHEM 1110/11*. A study of modern engineering materials with emphasis on their chemical, physical, and mechanical properties. Experimental determination of structural and processing variables, service behavior, and industrial applications. Lecture and lab. (spring)

ENTC 3310 Circuit Analysis (3 credits)—*Prerequisite(s): ENTC 2310 and MATH 1850*. Loop equations and node voltage analysis, principles of phasers and complex numbers applied to alternating current circuits, superposition, Thevenin's and Norton's Theorems, solving circuit problems using the computer. (spring)

ENTC 3320 Electronics II (4 credits)—*Prerequisite(s): ENTC 2320, ENTC 3310*. Multistage amplifiers, coupling, frequency response, classes of amplification, power amplifiers, feedback amplifiers, sinusoidal oscillators, multi-vibrator circuits, and operational amplifier circuits. Lecture and lab. (fall)

ENTC 3331 RF Fundamentals (3 credits)—*Prerequisite(s): PHYS 2010, PHYS 2011, MATH 1850*. A study of the physical and optical characteristics of active and passive devices used in electronic, instrumentation, and biomedical engineering technologies. (fall)

ENTC 3340 Electrical Machinery (3 credits)—*Prerequisite(s): ENTC 2310*. Motors, generators, alternators, motor controllers, three phase electrical systems, polyphase transformers, wattmeters. Lecture and lab. (fall)

ENTC 3350 Industrial Electronics (3 credits)—*Prerequisite(s): ENTC 2320*. SCR devices, silicon controlled rectifier circuits, relay circuits, timing circuits, photoelectric devices, unijunction transistors, diacs, triacs, saturable core reactors, rectification of three phase, industrial controls, programmable logic controllers, and fiber optics. (spring)

ENTC 3370 Electronics-Digital Circuits (4 credits)—*Prerequisite(s): One computer science course.* Introduction to digital logic, binary numbers and codes, Boolean algebra, gating networks, flipflops, counters, registers, arithmetic circuits, code conversion, decoding, and memory circuits. Lecture and lab. (spring, summer)

ENTC 3400 Construction Materials (4 credits)—*Prerequisite(s): ENTC 2410 and PHYS 2010/11*. Study of materials used in highway and building construction including production and appropriate specifications and testing. Study includes design calculations and laboratory testing. Lecture and lab. (fall)

ENTC 3410 Construction Estimating and Planning (4 credits)—*Prerequisite(s): ENTC 2420.* Comprehensive study of building construction costs, including labor, materials, overhead, and hidden costs. Financing methods and legal requirements, site planning, and tract-development. Lecture and lab. (fall)

ENTC 3420 Advanced Construction Estimating and Planning (4 credits)—*Prerequisite(s): ENTC 3410.* An advanced study of estimation techniques and procedures associated with commercial construction. Included is an analysis of costs developed from complicated construction systems resulting in the preparation of bid proposals. Emphasis will be placed on network planning, particularly project scheduling and detailed quantity take-off methods of estimating using commercially available computer software. Lecture and lab. (spring)

ENTC 3430 Materials and Methods I (4 credits)—*Prerequisite(s): ENTC 3010 and ENTC 2410*. Methods, materials, and equipment required in the commercial construction areas of foundations, formwork, concrete, and masonry. Study will include design calculations and laboratory testing. Lecture and lab. (spring)

ENTC 3440 Materials and Methods II (3 credits)—*Prerequisite(s): ENTC 3430*. Methods, materials, and equipment required in the commercial construction areas of structural steel, heavy timber, roofing systems, building-related plastics, finishes, and specialties. Study will include sizing calculations where appropriate. Lecture (fall)

ENTC 3600 Manufacturing Technology (3 credits)—*Prerequisite(s): ENTC 2200*. This course has as its primary emphasis the study of the management and production aspects of manufacturing. Students will have the opportunity to learn mass-production principles and methods, including the use of computers and robotics. Laboratory experiences will revolve around the design, planning, and mass production of an item. (fall)

ENTC 3610 Construction Technology (3 credits)—A course designed to develop an individual's knowledge and understanding of the concepts, principles, practices, and problems found in the modern construction industry. Laboratory experiences involve activities in planning, use of tools, machines, and materials, computer applications, and construction practices as they relate to construction production systems.

ENTC 3620 Thermal and Fluid Technologies (4 credits)—*Prerequisite(s): MATH 1840 and PHYS 2010/11*. A study of the fundamentals of heat transfer and fluid flow. Topics include modes of heat transfer and material characteristics, hydraulics and fluid systems. Students will choose concluding topics of either hydrology or hydraulic control systems and pneumatics. Laboratory use of personal computers in

data acquisition, experiment control, and report writing. Lecture and lab. (spring)

ENTC 3650 Applied Electricity and Electronics (4 credits)—Geared for construction technology and technology education students only or permission of instructor. Practical application of commercial house wiring and electrical code. Electrical machines and controls, electronic devices. (fall, spring)

ENTC 3660 Communication Systems Technology (3 credits)—*Prerequisite(s): ENTC 1110 or permission of the instructor*. A study of the basic principles of communication technology and communication systems The primary focus is on the examination and operation of technical devices that aid human communication and the impact these devices and systems have upon society. Students will participate in a variety of classroom activities and laboratory exercises.

ENTC 3670 Energy/Power/Transportation (3 credits)—This general survey course focuses on the design and operating principles involved with the conversion, transmission, control, and alternate sources of power and energy. The course also explores the development and significance of energy and power and transportation systems to our economic structure. Lecture and lab. (summer)

ENTC 3680 Plastics (3 credits)—*Prerequisite(s): ENTC 1120 and CHEM 1110/11*. A study of the polymer and composites industries to include products and manufacturing processes, Thermoplastic and thermosetting class studies, injection molding, vacuum forming and other subjects are explored. Lecture and lab. (spring, odd years)

ENTC 3710 Manual Numerical Control Programming (3 credits)—*Prerequisite(s): ENTC 2170 and ENTC 2200*. A study of the capabilities, programming procedures, advantages, and disadvantages of numerical control (N/C) and computerized numerical control (CNC) metalworking machine tools. Manual methods for generating, debugging, and running point-to-point and continuous path programs including linear and circular (3 credits) interpolation, canned cycles, loops, and subroutines to produce workpieces of increasing complexity. Lecture and lab.

ENTC 3989-99 Internship/Cooperative Education (1-3 credits)

ENTC 4017/5017 Industrial Supervision (3 credits)—Behavioral studies related to supervision. Supervisory functions, motivation, interviewing, and personal advancement. Lecture, case studies, discussions, and reports. (fall, spring)

ENTC 4018 Honors Thesis (3-6 credits)—*Prerequisite(s): Satisfactory completion of all college honors classes and advisor approval*. This thesis is a capstone academic experience bringing into focus the result of the student's learning and career interest

ENTC 4037/5037 Quality Assurance I (3 credits)—*Prerequisite(s): MATH 1530*. Objectives of quality control in manufacturing. Control charts for variables, control charts for attributes, and lot by lot acceptance sampling for attributes (ANSI/ASQC Z1.4). The statistical approach to methods and procedures associated with quality assurance in manufacturing processes. Lecture (spring)

ENTC 4047/5047 Quality Assurance II (3 credits)—*Prerequisite(s): ENTC 4037*. Special process control charting defect, moving average, CuSum charts, sequential sampling, lot by lot acceptance for variables (ANSI/ASQC Z1 9), reliability testing, failure rate of a population, bathtub curve, and series/parallel math modeling for reliability. Lecture (spring)

ENTC 4048 Honors International Study (3 credits)—*Prerequisite(s): Satisfactory completion of all CAST Honors courses or college honors committee approval*. This course will consist of a two-week international study and cultural experience in addition to a pre-tour orientation.

ENTC 4060 Project Scheduling (3 credits)—*Prerequisite(s): Junior/Senior standing or instructor approval*. A detailed study in planning, organizing, and controlling projects. Computer software is used to schedule projects Emphasis is placed on time, resources, and capital considerations for the project. Lecture, team exercises, extensive laboratory, and presentations. (fall, spring, summer)

ENTC 4217/5217 Tool Design (4 credits)—*Prerequisite(s): ENTC 3710*. A study of the design concepts for industrial tooling including stamping dies, fixtures, and molds. Materials selection, heat treatment specifications, off-the-shelf tooling components, and make/buy decisions. Utilization of CADD and CNC to execute designs. Lecture and lab.

ENTC 4227/5227 Engineering Economy (3 credits)—*Prerequisite(s): MATH 1720 or permission of the instructor*. An economic study of manufacturing. amortization, cash flow, rates of return, depreciation, and present worth analyses. Lecture (fall)

ENTC 4237/5237 Ergonomics and Process Optimization (4 credits)—*Prerequisite(s): MATH 1720 and MATH 1530*. A study of methods used to improve production, set time standards, and analyze productivity. Lecture and lab. (spring, odd years)

ENTC 4247/5247 Industrial Operations Analysis (3 credits)—*Prerequisite(s): ENTC 2200 and the MATH 1040, MATH 1060, MATH 1070, MATH 1080 sequence*. Deterministic models including linear programming, quality, transportation, network analysis, game theory, and inventory theory. For a second course see MATH 4957. Lecture

ENTC 4257/5257 Plant Layout and Materials Handling (3 credits)—*Prerequisite(s): ENTC 1120 and ENTC 2200*. Principles of plant layout, process and flow charts, machine location, auxiliary services, safety, and personnel organization. Materials handling methods and case studies emphasized. Lecture
(spring)

ENTC 4277/5277 Instrumentation and Process Control (4 credits)—*Prerequisite(s): ENTC 2310*. Principles of measurement and control used in the manufacturing process industries. Theory and laboratory experience pertaining to modern instrumentation, pressure, temperature, liquid level, flow, and automatic controls including PLC's, and microcomputers. Lecture and lab. (spring)

ENTC 4287/5287 Introduction to Robotics (3 credits)—*Prerequisite(s): CSCI 2100 or permission of instructor*. Theory, fundamental concepts, and applications of robotics and computer-aided manufacturing. History, robot elements and types, actuators and manipulators, programmable systems, vision systems, safety, robotic work cells, applications, and economic analysis. Lecture and lab.

ENTC 4307/5307 Telecommunications (4 credits)—*Prerequisite(s): ENTC 4310*. Analysis, theory, and applications of digital communication systems, emphasizing digital modulation and demodulation schemes and performance analysis techniques in the presence of noise. (spring, even years)

ENTC 4310 Electronics-Communications (4 credits)—RF transmitting and receiving circuits, amplitude and frequency modulation and detection, phase modulation, antennas and RF transmission lines, multiplexing, television transmission, and reception. Lecture and lab. (fall)

ENTC 4337/5337 Microprocessors (4 credits)—*Prerequisite(s): ENTC 3370*. Introduction to microprocessors Instruction is developed around a microprocessor trainer. Topics include assembly language programming, examples of hardware/software tradeoffs, interrupt system, alternative approaches to input/output and timing, the use of programmable LSI devices, and how microcomputers can communicate with external systems. Lecture and lab. (fall)

ENTC 4347/5347 Digital Signal Processors (4 credits)—*Prerequisite(s): ENTC 4337. A continuation of ENTC 4337*. Instruction is developed around an microprocessor single board computer. Topics include review of microprocessor hardware and instruction set, arithmetic operations, serial data communications, interfacing analog devices, using interval timers, stepper motor control, and an introduction to trouble-shooting. Lecture and lab. (spring)

ENTC 4350 Biomedical Instrumentation I (4 credits)—*Prerequisite(s): HSCI 2020/21, PUBH 2750, ENTC 3320*. A first course in biomedical instrumentation. Content includes hospital equipment safety, biopotentials, electrodes and transducers, the principles of electrocardiographs, pacemakers, defibrillators, IV pumps, catheters and ventilators, information flow, medical indications and complications, the patient-machine interface, how to teach others to use the equipment. Laboratory experiments on medical circuits will be studied or performed. (fall, even years)

ENTC 4357/5357 CIM Applications (3 credits)—*Prerequisite(s): Junior standing.* An interdisciplinary course concerned with the concepts of business, computers, and manufacturing designed to explore the integration of these dynamic disciplines in the development of the Computer-Integrated Enterprise. Field trips, lab activities, and demonstrations will be used to support the lectures. (spring)

ENTC 4360 BMET Internship I (2 credits)—*Prerequisite(s): HSCI 2020/21, PUBH 2750, ENTC 3320 Corequisite(s): ENTC 4350.* The student will be assigned to a selected regional hospital for eight credits per week after the fourth week of classes, and then for 40 hr/week for three weeks after the semester ends. The student will work under the supervision of a senior BMET or clinical engineer. Assignments will include PM, calibration, troubleshooting and repair, and management of equipment taught in ENTC 4350. The student will be required to pass a pre-employment physical examination and have liability insurance before being assigned to internship. (fall, spring, summer)

ENTC 4370 BMET Instrumentation II (4 credits)—*Prerequisite(s): ENTC 4350.* A second course in biomedical instrumentation Content includes biomedical equipment analysis, clinical lab equipment, ultrasonics, lasers, surgical equipment and troubleshooting of medical equipment.

ENTC 4380 BMET Internship II (2 credits)—*Prerequisite(s): ENTC 4350, ENTC 4360 Corequisite(s): ENTC 4370.* The student will be assigned to a regional hospital for eight credits per week for 15 weeks The student will work under the supervision of a senior BMET or clinical engineer. Assignments will include hands-on repair, PM and calibration of and management of hospital equipment studied in ENTC 4370. The student may be required to pass a pre-employment physical exam and acquire liability insurance before assigned to an internship.

ENTC 4390 Medical Imaging Equipment Technology (3 credits)—*Prerequisite(s): ENTC 3320.* Medical diagnostic equipment, including x-ray, ultrasonic equipment, ultrasonics, nuclear imaging, magnetic resonance imaging (MRI) and Position Emission Scanner will be discussed. Medical image processing based on Fourier Analysis will be developed Emphasis is on physical principles, information flow, patient interface, indications and hazards. (fall, spring)

ENTC 4417/5417 Construction Financing and Administration (3 credits)—*Prerequisite(s): ENTC 2420, CSCI 1100.* A detailed study of the methods of financing construction projects, as well as the construction company. Included are a discussion of interest rates, bonds, insurance, amortization, and depreciation. Lecture (fall)

ENTC 4600 Technical Practicum (4 credits)—*Prerequisite(s): Senior standing, ENTC 3030, and at least 24 credits in a technology concentration.* A senior-level capstone course in advanced problem solving by organized team methods. Requires the student to synthesize and apply subject matter studies in previous required courses. For example, in manufacturing, students will draw upon their knowledge of product design and manufacturing methods to solve a complex problem. Units of instruction will include project planning (GANTT and PERT), human factors, design aesthetics, systems methods, and group dynamics. Major requirements include a team presentation and a comprehensive technical report. Lecture and lab. (fall, spring)

ENTC 4617/5617 Vocational Guidance (3 credits)—An orientation to the value and use of vocational guidance for vocational education. The roles of people, as well as the tools for guidance will be studied along with determining ways and means of providing current career information to students. Meeting the needs of the disabled and disadvantaged in vocational classes will be explored.

ENTC 4637 Evaluation in Industrial Education (3 credits)—Fundamental concepts and terminology of the testing movement. Classification, characteristics, and use of tests in industrial education. Construction of informal tests, use of standardized tests, and interpretation of test results are covered. Also, the use of advisory committees in the evaluation of industrial education courses and programs.

ENTC 4717/5717 Computer-Assisted Numerical Control Programming (3 credits)—*Prerequisite(s): ENTC 3710.* A study of computerized methods for generating numerical control (N/C) programs utilizing (1) tool path definition software applicable to CADD drawing data bases and (2) N/C programming languages including APT and COMPACT II. Source program structure including initialization, geometry definition, cutter path definition statements, links, post processors, Syntax conventions, writing, running, and debugging source programs to generate list/cutter location files and tape files. Lecture and lab.

ENTC 4777/5777 Safety Management (3 credits)—*Prerequisite(s): PSYC 1310 and junior standing.* A study of the methods of planning, organizing, and controlling a safety program. The study will include the safety problem, accident causation, motivational and marketing methods of safety, safety training and leadership, and a study of OSHA and TOSHA practices and procedures. (fall, spring)

ENTC 4900 Independent Study in Technology (1-6 credits)—*Prerequisite(s): Minimum of nine credits in the subject area and approval of the instructor who will supervise the study.* An industrial problem by arrangement with a faculty member. An independent study plan technical report plus laboratory experiences required.

ENTC 4957/5957 Special Topics in Technology (1-6 credits)—Special topics of current interest to groups of students concerning content not presented in regular course offerings. May be repeated for credit if material covered is significantly different or advanced.

ENTC 4989-99 Internship/Cooperative Education (1-3 credits)(fall, spring, summer)

Environmental Health
ENVH

Note: Students should take courses in the sequence listed

ENVH 3010 Human Ecology and Environmental Education (3 credits)—Gives the student an understanding and appreciation of peoples' relationships to their environment and the consequences of manipulation, alteration, and pollution of their natural habitat. Environmental education as a means of environmental improvement is emphasized.

ENVH 3030 Law and Ethics for Allied Health (3 credits)—Introduction to law and ethics necessary for allied health professionals to successfully function in the modern health care environment.

ENVH 3040 Environmental Sanitation (3 credits)—Not for environmental health majors. Deals with problems of general sanitation, water supply, disposal of excreta, insect and rodent control, sanitary control of milk, shellfish, and other foods, school and camp sanitation, and inspection services. Consideration given current problems in housing, heating, ventilation, and lighting.

ENVH 3100 Water Supplies and Wastewater Treatment (3 credits)—An introduction to water and wastewater treatment, municipal, semiprivate, and individual systems. Reviews sources, chemical and bacteriological quality, and water pollution.

ENVH 3400 Introduction to Air Pollution (3 credits)—*Prerequisites: CHEM 1110/11 or permission of instructor.* A study of the causes, effects, and control of air pollution. Emphasis is placed on ways individuals, communities, metropolitan areas, and industry can prevent or control pollution.

ENVH 3500 Environmental Safety (3 credits)—Considers the principles and practices of environmental health and safety in natural bathing places, swimming pools, campsites, day nurseries, parks, schools, colleges, and industry.

ENVH 3700 Solid Waste Management (3 credits)—An investigation of the problems and solutions to the generation, storage, collection, and disposal of solid wastes, including aspects of vector control. Includes the management aspects of planning, organizing, designing, and operating refuse collection and disposal systems.

ENVH 3888 Honors Research Orientation (1 credit)—*Prerequisite(s): Admitted to ENVH Honors Program.* An honors course introducing the principles, designs, methods, materials, and tools of research used in environmental health sciences. Students will identify and initiate a research project appropriate for the Honors Thesis.

ENVH 3989-99 Internship/Cooperative Education (1-3 credits)—May substitute for ENVH 4080.

ENVH 4000 Public Health Law (3 credits)—An introduction to Public Health Law, including a study of the legal powers available for implementing programs, methods for their most effective use, and recognition and management of legal problems, an analysis of the legal relationship of an environmentalist to the government, the staff, and the public. Not required of international students.

ENVH 4018 Honors Thesis Research (1-3 credits)—*Prerequisite(s): Admitted to ENVH Honors Program.* Conduct honors research and complete the thesis. Variable credit (1-3) course, repeatable up to 6 credits.

ENVH 4080 Environmental Health Practice (3 credits)—*Prerequisite(s): Open to environmental health majors only.* Field experience in environmental health.

ENVH 4100 Shelter Environments (3 credits)—A course covering the principles of healthful housing and environment control of mobile homes, jails, motels, and hotels.

ENVH 4207/5207 Principles of Radiological Health (3 credits)—*Prerequisite(s): CHEM 1110/11 or permission of instructor.* The basic principles and procedures pertaining to the safe control of all common sources of ionizing radiation and the causes, effects, and control of radiation are included. The laboratory experiments include safety monitoring, radiation detection, and the use of survey meters.

ENVH 4340 Occupational Health (3 credits)—*Prerequisite(s): CHEM 1110/11 or permission of instructor.* Familiarizes the student with health problems encountered in industry and various occupations. The causes of occupational diseases and ways to prevent the diseases are emphasized. Introduction to types of radiation, with emphasis on controlling the amount of radiation a person receives.

ENVH 4347/5347 Ergonomics (3 credits)—A study of human factors engineering concerning people, their work, and the work environment Includes a discussion of the ergonomics approach to the work environment, including sensory and motor control, workplace design, heat stress, noise, vibrations, illumination, the measurement of work, anthropometric data, and related topics.

ENVH 4357/5357 Toxicology (3 credits)—*Prerequisite(s): CHEM 2010/11 and HSCI 3020; or permission of instructor.* A study of the essentials of toxicology, including toxicity determinations and measurements, and biologic factors important in understanding toxicity. A review of toxic substances in air, water, foods, and the workplace with a consideration of exposure limits, their rationale and evaluation methods.

ENVH 4360 Industrial Hygiene Laboratory (4 credits)—Evaluation of chemical and physical hazards in industrial work places. Potential hazards include noise, glare, heat, dust, solvents, radiation, etc.

***ENVH 4387/5387 Biological Analysis in Environmental Health (4 credits)**—*Prerequisite(s): A course in general microbiology; HSCI 3320/21 or HSCI 3330/31 and permission of the instructor.* The principles of microbiology with emphasis on growth requirements and the effects of chemical and physical agents as used for control, principles of aquatic toxicology. Instrumentation used in qualitative and quantitative analysis of the biological environment.

***ENVH 4397/5397 Environmental Analysis (4 credits)**—*Prerequisite(s): Seniors only, CHEM 1110/11, CHEM 1120/21, and permission of the instructor.* Provides training in physical and chemical analysis of water, wastewater, food, air, and toxic materials, principles of applied toxicology. Experience in the use of chemical instruments, as well as field test kits, will be obtained.

ENVH 4400 Environmental Health Program Planning and Administration (3 credits)—*Prerequisite(s): ENVH 3100, ENVH 3400, ENVH 3700, or permission of the instructor.* A study in how to administer, plan, and evaluate environmental health programs. The availability of resources and the relationship with other health agencies are given.

ENVH 4500 Fundamentals of Occupational Safety and Health (3 credits)—*Prerequisite(s): ENVH 3500 or permission of the instructor.* This course considers the principles and practices of Safety and Health Fundamentals, Performance Management, Managing Change for Safety and Health Professionals, and the elements of a successful Safety and Health Program.

ENVH 4607/5607 Food Sanitation Principles (3 credits)—*Prerequisite(s): General microbiology, HSCI 3320/21, or HSCI 3330/31.* A study of food composition, engineering principles, processing and preservation methods, food-borne diseases, and food regulatory programs.

ENVH 4610 Soil Science for Environmental Health (2 credits)—Survey of the chemical, biological, and physical concepts from soil science used in environmental health. Course covers soil formation, structure, and classification. Typical analytical procedures and soil characterization methods are described. Application to onsite wastewater treatment systems, municipal landfills, and hazardous waste landfills are covered.

ENVH 4710 Introduction to Hazardous Waste (3 credits)—Considers hazardous waste in its various forms. solid, liquid, and gaseous. Topics covered include generation, storage, transport, and disposal of the waste.

ENVH 4727/5727 Hazardous Waste Operations and Emergency Response (3 credits)—The objectives of the course include giving the student basic concepts and techniques for appropriate behavior before, during, and after a hazardous materials incident. The course meets requirements to obtain 40-hour HAZWOPER certification. Three lecture hours per week.

ENVH 4888 Honors Seminar (1 credit)—*Prerequisite(s): Admitted to ENVH Honors Program.* Students will orally present the results of their honors thesis research. Credit can be earned by presenting the research results at a professional meeting.

ENVH 4905 Independent Studies in Environmental Health (1-4 credits)

ENVH 4957/5957 Special Topics in Environmental Health (1-6 credits)

ENVH 4989-99 Internship/Cooperative Education (1-3 credits)—Students will complete three credits of lecture and one credit of lab per week

Environmental Studies
ENVS

ENVS 2010 The Natural Environment in Appalachia (3 credits) — The course surveys the environmental history of Appalachia with a focus on the history of industrialization and the emergence of conservation movements in the region.

ENVS 4950 Integrative Seminar in Environmental Studies (3 credits) — This is a capstone course for students in the Environmental Studies minor. Students will complete 20-30 hours of service with a local/regional group or institution. Service placements will be chosen in consultation with the instructor, based on students' particular areas of interest within environmental studies (such as business/commerce; public policy/activism; conservation/natural resources; interpretation/education). Students will read course texts in common with other students, plus texts related to service placement.

Academic Affairs
ETSU

ETSU 1000 University Seminar (2 credits)— This course is designed to help students learn about themselves, the university, and learning itself, so they succeed in graduating from ETSU and in achieving their goals beyond college.

ETSU 1010 Practical Decision Making

ETSU 1350 Health Professions Exploration Seminar (2 credits)—This course will assist students in gaining a realistic understanding of the health care career choice and the components of the admissions process to professional schools. Topics addressed will include critical thinking in health care, academic development, the importance of practical experience, development of altruism, the professional school interview, the application process, GPA/transcript evaluations, personal essays, interviews, ethics, and modern trends in health professions.

Finance
FNCE

Note: All students enrolling in upper-division, 3000-4000 level, College of Business and Technology courses must have junior or senior standing.

FNCE 3120 Principles of Real Estate (3 credits)—A study concerning economic, social, financial, and legal problems involved in acquiring, holding, and disposing of real estate. (fall)

FNCE 3130 Real Estate Law (3 credits)—A study of property rights and liabilities, real estate instruments, estates, leases, and liens. The approach is from the businessperson's viewpoint. (spring)

FNCE 3210 Personal Finance (3 credits)—A consumer-oriented introduction to finance. Budget priorities, credit, interest rates, insurance, investments, housing, and estate planning are all treated in a straightforward manner.

FNCE 3220 Business Finance (3 credits)—*Prerequisite(s): ACCT 2010*. Emphasis upon the decision-making tools used in financial management including ratio analysis, operating and financial leverage, interest factors, capital budgeting, valuation, cost of capital, and dividend policy. (fall, spring, summer)

FNCE 3300 Principles of Investment (3 credits)—*Prerequisite(s): FNCE 3220*. Stock, bond, and option markets, mutual funds, the stock brokerage business, investment advisory services, introduction to the basics of investment decision-making. (fall, spring, summer)

FNCE 3500 Capital Budgeting (3 credits)—*Prerequisite(s): FNCE 3220*. An advanced course in financial management emphasizing capital asset selection under conditions of risk. (fall, spring, summer)

FNCE 3600 International Financial Markets (3 credits)—*Prerequisite(s): FNCE 3220*. This course covers topics such as an overview of international monetary systems, market structure and institutions, international parity conditions, foreign exchange rate determination and forecasting, foreign exchange market efficiency, eurocurrency and eurobond markets, currency and interest future, options, and swaps regulation and intervention.

FNCE 4018 Senior Honors Seminar (3 credits)—*Prerequisite(s): ECON 3088 and admission to the College of Business and Technology Honors Program; by permit only.* A seminar for College of Business and Technology honors students who are working on senior honors theses or other approved projects. Upon successful completion of the course, students will have demonstrated the ability to complete the research process by creating a written product suitable for submission to the College of Business and Technology faculty. (offered on an individual basis)

FNCE 4320 Real Estate Appraisals (3 credits)—A study of the fundamentals of appraising various properties and of the three major approaches to finding value: cost, income, and market. (fall)

FNCE 4330 Real Estate Finance (3 credits)—*Prerequisite(s): FNCE 3120 or FNCE 3220*. A study of the various sources of funds for financing real estate transactions, and of problems encountered in financing real estate. (fall, spring)

FNCE 4340 Real Estate Brokerage (3 credits)—*Prerequisite(s): FNCE 3120, FNCE 3220, or consent of instructor*. A study of agency operations, including listing, prospecting, advertising, showing property, and closing transactions.

FNCE 4350 Real Estate Management (3 credits)—*Prerequisite(s): FNCE 3120 or consent of instructor*. A basic course dealing with the functions, qualifications, and responsibilities of the property manager. The nature and kinds of property with which the manager might be involved are discussed.

FNCE 4360 Real Estate Appraisal Problems (3 credits)—*Prerequisite(s): FNCE 4320*. A course designed to study appraisal problems in actual field situations, as well as in the classroom. (spring)

FNCE 4447/5447 Banking and Financial Intermediation (3 credits)—*Prerequisite(s): FNCE 3220 and ECON 3310*. The workings of financial markets and institutions with special reference to banking. (fall)

FNCE 4500 Credit Management (3 credits)—*Prerequisite(s): FNCE 3220*. The nature and importance of credit. An analysis of principles underlying the extension of credit and the management of credit operations. (fall)

FNCE 4520 Bank Policy (3 credits)—*Prerequisite(s): FNCE 4447*. A course in bank management. Emphasis will be placed on key financial concepts and their application in financial management decisions. Use of case problems. (spring)

FNCE 4560 Portfolio Theory and Valuation (3 credits)—*Prerequisite(s): FNCE 3300*. Selection and valuation of portfolios of securities. (fall, spring)

FNCE 4597/5597 International Financial Management (3 credits)—*Prerequisite(s): FNCE 3300 and FNCE 3500*. Financial problems of multinational corporations including the theory of capital movements, foreign exchange markets, concepts of the balance of payments mechanisms, trade policy, and the functioning of the international monetary systems. (fall, spring)

FNCE 4617/5617 Applied Equity Valuation (3 credits)—*Prerequisite(s): FNCE 3300 or BADM 5430*. This course provides a solid practical foundation in equity valuation through the analysis and selection of equity securities for a portfolio of funds provided by the Tennessee Valley Authority (TVA). (fall, spring)

FNCE 4620 Financial Analysis and Policy (3 credits)—*Prerequisite(s): FNCE 3300, FNCE 3500, and senior standing.* An integrative course designed to provide insight and experience in problem solving in finance. The course utilizes cases and computer applications. This is the capstone course for all finance majors. (fall, spring)

FNCE 4697/5697 International Investments (3 credits)—*Prerequisite(s): FNCE 3220 and FNCE 3300; or permission of the instructor.* To immerse you in the world of international investments. Advanced course designed to equip students with the theoretical background, quantitative skills, and practical tools required to be successful managers in the field of international investments. Topics will include a review of parity conditions, foreign exchange rate forecasting, benefits of international diversification, international asset pricing, international equity markets, instruments, concepts and techniques, emerging stock market futures options, international performance analysis, and structuring the international process.

FNCE 4900 Independent Study in Finance (1-3 credits)—A course designed for advanced students who, under the director of a finance faculty member, wish to engage in independent research or an intensive study of subjects not covered in other available courses. Prior departmental and college approval is needed. (offered on an individual basis)

FNCE 4905 Banking Internship (3 credits)—*Prerequisite(s): Completion of, at least, six credit hours at the upper-division level in the student's major, junior or senior standing, and a 2.7 GPA or above*. Students are selected through a competitive process for assignments in approved financial institutions as interns under the supervision of the internship coordinator and field placement supervisors Students may not earn more than three semester credits for this course which can be used as a free elective or an elective within a business major with prior approval by the chair. (offered on an individual basis)

FNCE 4906 Finance Internship (3 credits)—*Prerequisite(s): Completion of, at least, six credit hours at the upper-division level in the student's major, junior or senior standing, and a 2.7 GPA or above*. Students are selected through a competitive process for assignments in approved business or public-sector organizations as interns under the supervision of the internship coordinator and field placement supervisors. Students may not earn more than three semester credits for this course which can be used as a free elective or an elective within a business major with prior approval by the chair. (offered on an individual basis)

FNCE 4957/5957 Topics in Finance (1-6 credits)—*Prerequisite(s): Senior standing.* This course gives students an opportunity to study special problems and new developments in the field of finance. (offered on an individual basis)

Foreign Languages

(See LANG)

Also see CHIN, FREN, GERM, GREK, JAPN, LATN, SPAN

French

FREN

FREN 1010 Beginning French I (3 credits)—Introduction to the French language and to the culture, geography, and history of French-speaking countries.

FREN 1020 Beginning French II (3 credits)—*Prerequisite: A grade of at least a C- in FREN 1010, credit received from CLEP exam, or with consent of the coordinator for French*. Introduction to the French language and to the culture, geography, and history of French-speaking countries.

FREN 2010 Second-Year French I (3 credits) — *Prerequisite: A grade of at least a C- in FREN 1020, credit received from CLEP exam, or with consent of the coordinator for French*. A continuation of first year, with an introduction to French literature.

FREN 2020 Second-Year French II (3 credits) — *Prerequisite: A grade of at least a C- in FREN 2010 or with consent of the coordinator for French*. A continuation of first year, with an introduction to French literature.

FREN 3010-3110 French Conversation and Composition (3 credits)—Practice in conversation, with emphasis on idioms, syntax, and current expressions. Study of grammar through compositions.

FREN 3210 Readings in French (3 credits)—A study of techniques and strategies to improve reading skills in French.

FREN 3310 French Civilization (3 credits)—Geography, history, and culture of France.

FREN 3510 Survey of French Literature Before 1700 (3 credits)—Study of major French authors from the Middle Ages through 1700.

FREN 3610 Survey of French Literature After 1700 (3 credits)—Works of major French authors from the 18th century through the present.

FREN 4017/5017 Advanced French Grammar (3 credits)—*Prerequisite(s): FREN 2020 or permission of instructor*. This course focuses on an in-depth review of troublesome aspects of French grammar complemented by contextual analyses drawn from cultural and/or literary readings selections.

FREN 4018 Honors Thesis (3-6 credits)—Open to those in university honors programs only. A capstone experience serving as the culmination of an honors curriculum.

FREN 4117/5117 French Drama from 1600 to the Present (3 credits)—Selected plays from major French dramatists from 1600 to the present.

FREN 4217/5217 Sixteenth Century French Literature (3 credits)—Selected works by the principal 16th century writers and poets of the Renaissance.

FREN 4317/5317 Seventeenth Century French Literature (3 credits)—Selected works from the prose, poetry, and theatre of the principal authors of the Classical Period.

FREN 4337/5337 French Phonetics and Pronunciation (3 credits)—A study of the International Alphabet, incorporating phonetic dictation and transcription.

FREN 4417/5417 Eighteenth Century French Literature (3 credits)—Selected works of the French philosophers and authors of the Age of Reason.

FREN 4517/5517 Nineteenth Century French Literature (3 credits)—Selected works from the poetry and prose of the major authors of French Romanticism.

FREN 4617/5617 Twentieth Century French Literature (3 credits)—Selected works from the prose and poetry of major French authors of the 20th century.

FREN 4900 Special Studies in French (1-3 credits)—Designed to provide opportunities for study in areas not provided for in the regular course offerings for undergraduates. Students desiring to enroll must obtain permission from the instructor.

FREN 4957/5957 Topics in French (1-6 credits)—This course gives the students an opportunity to study special problems and new developments in the field of French.

Geography

GEOG

GEOG 1012 Introduction to Cultural Geography (3 credits)—A survey of the spatial characteristics and value systems of cultures throughout the world. (fall, spring, summer)

GEOG 1013 Introduction to World Regional Geography (3 credits)—A survey of the major regions of the world with emphasis on their physical and cultural interrelationships. (fall, spring)

GEOG 1110 Earth Science: Weather and Climate (4 credits)—An introduction to atmospheric processes and geographic distribution of radiation, moisture, pressure, and circulation interacting to create weather systems and storms, oceanic influences, earth-sun relationship, global climate patterns, human interaction with atmosphere. Three lecture, two lab credits per week. (fall, spring, summer)

GEOG 1120 Earth Science: Landforms and Processes (4 credits)—An introduction to the agents and processes of landform development. Emphasis is also placed on distribution of landform systems and human impacts on these systems. Three lecture credits, two lab credits per week. (fall, spring, summer)

GEOG 3010 Economic Geography-Manufacturing and Service Industries (3 credits)—Evaluation of the distribution of different types of manufacturing and service industries and the factors underlying their locative choices. Analysis of the role of manufacturing and service activities in a modern urban-industrial society. (spring, odd years)

GEOG 3020 Economic Geography-Agricultural and Extractive Industries (3 credits)—A study of the spatial distribution and characteristics of agricultural and extractive industries of the world.

GEOG 3040 Conservation of Natural Resources (3 credits)—Investigation into the use, abuse, and allocation of natural resources.

GEOG 3060 Geomorphology (4 credits)—An investigation into the physical processes responsible for landforms. (fall, even years)

GEOG 3090 Meteorology and Climatology (4 credits)—A study of atmospheric elements and processes and climatic controls and patterns as they influence and are influenced by human life. (fall, odd years)

GEOG 3110 Modern Geographic Concepts (3 credits)—Concepts current in the field of geography are used as means for understanding in spatial and ecological points of view of the world. (spring)

GEOG 3120 Introduction to Geography of Southern Appalachia (3 credits)—A study of spatial organizations, compositions, interrelations, and interactions which characterize the Southern Appalachian region.

GEOG 3210 Cartography (3 credits)—An application of the principles of map construction, compilation, and the techniques of map drawing and map reading. (fall)

GEOG 3300 Political Geography (3 credits)—A study of the geographic foundations of a state in terms of national power. An evaluation of geopolitical theories and practices, territorial and commercial rivalries, and basic concepts of military strategy. (spring, odd years)

GEOG 4007/5007 Geography of the United States (3 credits)—A regional study of the physical and cultural elements of the United States. (fall, odd years; spring, even years)

GEOG 4017/5017 Advanced Cartography (3 credits)—*Prerequisite(s): GEOG 3210 or permission of instructor*. A second course in the study of the science and art of mapmaking. Emphasis placed upon three components of modern cartography the input, storage, and output of digital spatial data, advanced and contemporary thematic mapping techniques, and computer-assisted map design. Topics are presented during lecture and applied by the students in a laboratory setting. Students also

gain experience in developing and implementing their own individualized map projects. (fall)

GEOG 4038 Honors International Study (3 credits)—*Prerequisite(s): Satisfactory completion of all College of Business and Technology Honors courses or college honors committee approval.* This course will consist of a two-week international study and cultural experience in addition to a pre-tour orientation

GEOG/URBS 4107/5107 Urban Geography and Planning (3 credits)—A geographical analysis of cities and urban regions. Urban growth patterns, location and interaction analysis, planning for urban regions, and travel behavior are emphasized. (spring, even years)

GEOG 4117/5117 Resource Management (3 credits)—The study of cultural attitudes, conceptual approaches, and evaluation techniques in resource management. Analysis of selected resource issues at various areal scales. (spring, even years)

GEOG 4217/5217 Geographic Information Systems (3 credits)—The field of GIS is relatively new and expanding and is concerned with techniques and theory of cartographic and spatial data rectification and enhancement and spatial information extraction. (fall)

GEOG 4227/5227 Remote Sensing (3 credits)—A systematic treatment of elements involved in interpreting, measuring, and mapping of images that appear on aerial photographs. (fall)

GEOG 4237/5237 Advanced Remote Sensing (3 credits)—A study of different types of remotely sensed images and their interpretation. (fall, even years)

GEOG 4257/5257 Geography of Soils (3 credits)—An introduction to soil science. Particular attention is focused on soil morphology, soil classification, and the study of distributional patterns of soils and their relationships to other geographical elements. (spring, even years)

GEOG 4267/5267 Hydrology (4 credits)—The study of water as it occurs in all phases of the hydrologic cycle and the analysis of currently developing water problems on the local, regional, and national levels.

GEOG 4307/5307 Regional Geography (3 credits)—Under this cover title, individual courses will be offered in such areas as Europe, Latin America, Asia, Soviet Union, and Africa. Course may be repeated as subject matter changes. (fall, spring)

GEOG 4317/5317 Advanced Geographic Information Systems (3 credits)—A critical examination of the contemporary issues involved with Geographic Information Systems and digital spatial data. One-half of the course content will be dedicated to practical training on the sophisticated vector-based GIS software called Arc/Info. A hands-on understanding of the nature and functionality of this software will be acquired within a workstation computer environment. (spring, even years)

GEOG 4417/5417 The Teaching of Geography and Earth Science (3 credits)—A course in methods and materials for teaching geography in grades 7 - 12, which will include teaching experiences in an area school. This course earns education credit only and does not meet requirements for a major or minor in geography. (fall, spring)

GEOG 4807/5807 Advanced Field Methods in Geography (3 credits)—A study of methods of measuring, recording, and synthesizing field data in geography.

GEOG 4907/5907 Independent Studies (1-3 credits)—*Prerequisite(s): Permission of department chair is required.*

GEOG 4957/5957 Topics in Geoscience (1-6 credits)—*Prerequisite(s): Dependent on subject matter.* Selected topics of current interest in geography. Offered upon sufficient demand for specific subject matter. May be repeated for different topics. Consultation with the instructor is recommended before enrollment.

GEOG 4989-99 Internship/Cooperative Education (1-3 credits)

Geology
GEOL

GEOL 1040 Physical Geology Lecture (3 credits)—A study of the earth and earth processes including mountains, rivers, ocean basins, glaciers, volcanoes, earthquakes, and plate boundaries with an introduction to rocks and minerals. Three lecture, two laboratory sessions per week. (fall, spring, summer)

GEOL 1041 Physical Geology Laboratory (1 credit)

GEOL 1100 Life Through Time (4 credits)—An overview of earth's history, biological and physical, as revealed by the fossil record and rock formations.

GEOL 2480 Geology Field Methods (4 credits)—*Prerequisite(s): GEOL 1040, GEOL 1050, or permission of instructor.* An introduction to the methods of measurement, sampling techniques, and data collection used by the field geologist. Topographic and airphoto techniques of mapping, section measurement, and description, and structure description and analysis will be treated. Three lecture, two laboratory sessions per week. (spring)

Honors students will be expected to map an area, mutually agreed on by the instructor and the student, and submit the map and a report on the selected area by the end of the semester.

GEOL 3001 Mineralogy I (4 credits)—*Prerequisite(s): GEOL 1040 and CHEM 1110 or permission of the instructor.* Mineralogy is the study of minerals through their crystal structure and morphology, and their optical properties. Students will learn to identify the major rock forming and accessory minerals, their environments of formation, and their common associations. Three lecture, two laboratory sessions per week. (fall)

Honors students will select and research four different mineral groups through the course of the semester. The student will submit an individual report on each mineral group which includes its chemistry, structure, formation, associations, distribution, economic importance, and uses. One report will be orally presented by the student to class members in the mineralogy course.

GEOL 3120 Economic Geology (4 credits)—*Prerequisite(s): GEOL 3001 and CHEM 1110.* Economic Geology is a study of the origin, nature, distribution, and exploitation of industrial mineral deposits, the major metallic minerals, fossil and mineral fuels, alternate energy sources. Three lecture, two laboratory sessions per week. (spring, even years)

GEOL 3391 Invertebrate Paleontology (4 credits)—Principles of taxonomy, classification, paleoecology, evolution, and geologic records of the major invertebrate phyla are considered. Three credits lecture and two laboratory periods each week. (spring, odd years)

Honors students will be required to choose a project which involves collection, preparation, and/or casting of fossil material which can then be used as part of the Geology teaching collection.

GEOL 3395 Vertebrate Paleontology (4 credits)—*Prerequisite(s): GEOL 1050, BIOL 1120, or permission of instructor.* The goal of this course is to provide a general overview of vertebrate evolution through time and to discuss how it is (and has been) interpreted from the fossil record. In addition, new theories and recent discoveries will be addressed (specifically, their relevance to past and current thinking). Two lectures and two laboratory sessions weekly. (spring, even years)

Honors students will be required to work a minimum of 20 hours at the Gray Fossil Site and submit a report on their work by the end of the semester.

GEOL 3400 Geologic Illustration (2 credits)—Development of skills in the preparation of illustrations for publication and oral presentations. Topics include ink work, layout, proportion, reproduction materials and methods, lettering, and preparation. Course content is also relevant to other fields. One lecture and two laboratory periods each week.

GEOL 3481 Natural Hazards and Society (3 credits)—*Prerequisite(s): GEOL 1040 or 1050 or CHEM 1110 or 1120 or GEOG 1110 or 1120 or ASTR 1010 or 1020 or consent of instructor.* Natural hazards include ground shaking from earthquakes, ash fall from volcanic eruptions, floods, and high winds and storm surge from hurricanes, etc. The cost of these and other hazards in terms of monetary losses and number of fatalities continues to escalate on a world scale. This course examines the characteristics of natural hazards; how to reduce their impacts through mitigation; preparedness, response, and recovery activities; effective warning systems; and the social, psychological, and political factors that influence risk and resilience.

GEOL 4018 Honors Thesis (3 credits) — Open to those in university honors programs only. A required capstone experience serving as the culmination of an honors curriculum. May be taken twice for a total of 6 credit hours.

GEOL 4120 Petrography (4 credits)—*Prerequisite(s): GEOL 3001or permission of instructor.* Igneous, sedimentary, and metamorphic rocks are examined both in hand specimen and in thin section. The student learns to recognize component minerals and other important characteristics and to apply principles of rock classification and identification. Three lecture, two laboratory sessions per week. (spring)

Honors students will collect and prepare a sequence of rocks, to be mutually agreed on by both the student and the instructor, which can be added to the Geology teaching collection. The project will include collection and description of rock hand samples, preparation of thin-sections, and a written report of both.

GEOL 4307/5307 Field Methods in Paleontology (3 credits)—*Prerequisite: GEOL 3395 or permission of instructor.* The goal of this class is to prepare students for field work on established paleontological sites. The focus of class will be the Gray Fossil Site in Washington County, Tennessee, but additional Pleistocene sites from the region will also be utilized. This class Is only taught during Summer Session. Four days in the field and one day in the classroom, weekly. (summer, odd years)

GEOL 4540 Sedimentation-Stratigraphy (4 credits)—*Prerequisite(s): GEOL 3001 or permission of instructor.* The first part of the semester is devoted to the origin, classification, and interpretation of sediments and modern sedimentary environments. The second part is devoted to the recognition of these environments in the geologic record through stratigraphic analysis. The latter includes principles of correlation, stratigraphic paleontology, compilation of stratigraphic maps, and interpretation of the geologic column. Three lecture, two laboratory sessions per week. (fall, even years; spring, odd years)

Honors students will be expected to choose a rock section in the region and measure and describe it in detail. The choice of section must be mutually agreed upon by the student and the instructor. The student will submit a detailed description and stratigraphic column of the section as a final report. The student may also choose to carry out a sedimentary analysis on an exposed rock section, a stream deposit, or soil horizon to be mutually agreed upon by the instructor and the student. Analyses will include petrographic description of sediments and grain size analysis of representative sediment/soil samples all to be presented in an end-of-semester report.

GEOL 4587/5587 Engineering Geology (4 credits)—*Prerequisite(s): GEOL 1040, MATH 1920 or permission of instructor.* Real-world applications of geology in the field of engineering. Topics include soil properties, floods and flood control, dams, stream management and reconstruction, erosion and erosion control, mass movement, municipal waste treatment, septic systems, radioactive waste disposal, tunnels, geologic applications of explosives, permafrost, strip mining and mine reclamation, earthquakes, coastal management. Three lecture, two laboratory sessions per week. (fall, odd years)

Honors students will be expected to choose a topic within the broad scope of Engineering Geology and write a term paper on the issue. The topic must be mutually agreed on by the student and instructor and the term paper will be orally defended in class. The paper should consider the history of the engineering project, how the site/issue was evaluated, what engineering techniques were considered and applied, the results of the engineering effort, and the political and social impacts of the project.

GEOL 4617/5617 Structural and Engineering Geology (4 credits)—*Prerequisite(s): GEOL 1040, MATH 1920 or permission of instructor.* Focus is on the description and analysis of geological structures within the Earth's crust, with an introduction to global tectonics. Includes the description of geological structures, the kinematics and dynamics of folding and faulting, stress, strain, deformation and rheology. Introduction to dislocation theory, principles of plate tectonics, micro-structural analysis, and selected orogenic systems of the world. Three lectures and two laboratory sessions weekly. Three lecture, two laboratory sessions per week. (fall, odd years)

Honors students will be expected to map a structurally complex area, mutually agreed on by the instructor and the student, and submit the map and a report on the selected area by the end of the semester.

GEOL 4989 Internship/Cooperative Education (1-3 credits)—*Prerequisite: Permission of department chair is required.* The Cooperative Education agreement seeks to build partnerships between ETSU, students, and area geoscience industry and service providers. This course will give partial credit toward a capstone thesis, on a project to be mutually agreed upon by Geology faculty and a geoscience industrial group, which will result in the student working for a year on a 6-credit hour project that produces a thesis. The student will enroll in GEOL 4889 for the fall semester of the project.

GEOL 4999 Internship/Cooperative Education (1-3 credits)—*Prerequisite: Permission of department chair is required.* The Cooperative Education agreement seeks to build partnerships between ETSU, students, and area geoscience industry and service providers. This course will give partial credit toward a capstone thesis, on a project to be mutually agreed upon by Geology faculty and a geoscience industrial group, which will result in the student working for a year on a 6-credit-hour project that produces a thesis. The student will enroll in GEOL 4890 for the spring semester of the project.

GEOL 4900 Senior Thesis (4 credits)—*Prerequisite: Permission of department chair is required.* The Department of Geosciences will require the completion of a senior Honors Thesis (GEOL 4899/4900) as a capstone course. A Geology faculty member, chosen by the student, will direct a year-long, 6-credit-hour, thesis project. Two additional committee members, one from Geology and one from outside the Geology Department, will serve on an advisory committee with the project director and also act as readers of the thesis. The student will enroll in GEOL 4900 for the spring semester of the project. The thesis will be publicly defended.

GEOL 4905 Independent Study (1-4 credits)—*Prerequisite(s): Permission of department chair is required.* This course is designed for students who would like to study an area of geology not covered in the curriculum. Students are expected to work independently, but under the close supervision of an instructor. A paper presenting their findings is required.

German

GERM

GERM 1010 Beginning German I (3 credits)—Introduction to the German language, and to the culture, geography, and history of German-speaking countries.

GERM 1020 Beginning German II (3 credits)— *Prerequisite: A grade of at least a C- in GERM 1010 or with consent of the coordinator for German.* Introduction to the German language, and to the culture, geography, and history of German-speaking countries.

GERM 2010 Second-Year German I (3 credits)—*Prerequisite: A grade of at least a C- in GERM 1020, credit received from CLEP exam, or with consent of the coordinator for German.* A continuation of first year, with an introduction to German literature.

GERM 2020 Second-Year German II (3 credits)—*Prerequisite: A grade of at least a C- in GERM 2010 or with consent of the coordinator for German.* A continuation of first year, with an introduction to German literature.

GERM 3011 German Literature I (3 credits)—German literature from its origins to the 17th century.

GERM 3021 German Literature II (3 credits)—German literature from the age of Goethe to the present.

GERM 3111 German Civilization (3 credits)—Geography, history, and culture of Austria, Germany, and Switzerland.

GERM 3121-41 German Conversation and Composition I and II (3 credits)—Practice in conversation, with emphasis on idioms, syntax, and current expressions. Study of grammar through written compositions.

GERM 4018 Honors Thesis (3-6 credits)—Open to those in university honors programs only. A capstone experience serving as the culmination of an honors curriculum.

GERM 4121 Twentieth Century German Literature (3 credits)—Impressionism, Expressionism, Post-War Literature.

GERM 4137/5137 The Age of Goethe (3 credits)—Selected works of the principal authors of the Storm and Stress, Classical, and Romantic periods in German Literature.

GERM 4147/5147 The German Short Narrative (3 credits)—Selected short-prose works of representative authors of the late 19th and the 20th century.

GERM 4157/5157 Austrian Literature (3 credits)—Selected works of principal Austrian writers and their impact on German literature.

GERM 4167/5167 Advanced German Grammar (3 credits)—In-depth review of troublesome aspects of German grammar. Review of grammar in context, as well as practice in composition and translation.

GERM 4901 Special Studies (1-3 credits)—Designed to provide opportunities for study in areas not provided for in the regular course offerings for undergraduates. Students desiring to enroll must obtain permission from the instructor.

GERM 4957/5957 Topics in German (1-6 credits)—This course gives students an opportunity to study special problems and new developments in the field of German.

Greek

GREK

GREK 1010 Introductory Ancient Greek I (3 credits)—Acquaints students with the phonetics, grammar and morphology of the Greek language as it was used in fifth-century (B.C.E.) Athens.

GREK 1020 Introductory Ancient Greek II (3 credits)—*Prerequisite(s): GREK 1010.* Brings students up to the intermediate stage in learning the grammar and syntax of the Greek language as it was used in fifth-century (B.C.E.) Athens.

Human Development and Learning

HDAL

(See Developmental Studies for below college-level courses)

HDAL 1000 College Adjustment (1 credit)—Designed to assist the new student in adapting to college life. Emphasis is on understanding human development, improving decision-making skills, study skills, and clarifying values. The course will also assist in identifying campus resources, career materials, and university administrative requirements/procedures regarding the academic status system, transcripts, official records, etc. This course cannot be used to satisfy requirements for general education or a major/minor in human development and learning.

HDAL 1010 Career Planning and Life Skills (3 credits)—An introduction to the theory and practice of career planning and decision making with an emphasis on occupational choice, self-assessment, career decision-making, occupational information, and selection of a college major. Students will be expected to apply this knowledge to the development of a personal career plan.

HDAL 1110 Family Development (3 credits)—The study of individual development beginning with infancy and continuing through the formation of the family. Basic concepts, principles, and issues in human and family growth will be stressed. (fall, spring)

HDAL 2000 Intimate Relationships (3 credits)—A study in human relations in dating, courtship, early marriage, alternatives, and variations. Special attention will be given to personal self-development, mate selection, role expectations, contraception and conception, child rearing, and personal, social, and sexual adjustment in premarital, marital, and extramarital experiences. (fall, spring)

HDAL 2008 Honors Service Learning (1 credit)—*Prerequisite(s): Admission to the College of Education's honors program.* Honors service learning in social/cultural agencies and programs related to education.

HDAL 2310 Developmental Psychology (3 credits)—A study of the human learning and development principles applicable to infancy, early child, childhood, adolescence, early adulthood, adulthood and the geriatric phase of life. (fall, spring)

HDAL 2320 Child Psychology (3 credits)—A study of child learning and development with an emphasis on application of behavioral science to parenting and teaching. (fall, spring)

HDAL 2325 Child and Adolescent Development for Educators (3 credits)—The intent of this course is to focus on human development from conception through adolescence with examples and applications primarily focusing on educational settings. It provides a multi-theoretical approach to the aspects of human development that are impacted by human interaction and nurturing, as well as those that are relatively unaffected by environmental input. Key concepts include, but are not limited to, gross and fine motor development, temperament, visual and auditory perception, family characteristics, genetic inheritance, attention, cognitive tempo, play, and language development as they impact academic learning.

HDAL 2330 Adolescent Psychology (3 credits)—A study of adolescent learning and development with emphasis on applications of behavioral science to parenting and teaching. (fall, spring)

HDAL 2335 Adult Development (3 credits)—This course provides students with a knowledge and understanding of adult developmental principles, phases, and issues covering the entire span of adulthood and review of the major frames of reference in the study of adulthood and how these impact the design of effective treatments during adulthood. (spring)

HDAL 2340 Understanding Cultural Diversity (3 credits)—This course is designed for the student to develop competencies that allow her/him to be more effective when relating and/or working with individuals of diverse groups in society. Students will have opportunities to develop awareness of their own cultural values and biases, to study prevalent beliefs and attitudes of different cultures, and to develop skills useful for appropriate interactions with particular groups. (fall, spring)

HDAL 2350 Solving the Puzzle of Life (3 credits)—This course is intended to raise individual self-awareness, in turn promoting enhanced self-esteem and greater life satisfaction. Students will learn about their personal value systems, decision-making styles, cultural/ethnic identity and personality styles. In addition, the course will address health relationship dynamics, behavior change and stress management, positive lifestyle development, and career decision-making. (fall, spring)

HDAL 3110 Child/Family/Community Relations (3 credits)—A study of the parent-child relationship as it evolves from the prenatal period through adolescence. Theoretical approaches describing the parent-child socialization process will be examined with emphasis on the parenting environment and child outcomes. (fall, spring)

HDAL 3310 Educational Psychology (3 credits)—A study of the systematic application of psychological and behavior principles to educational settings. (fall, spring)

HDAL 4007/5007 Applications of Group Process (3 credits)—This course will provide students in various non-counseling disciplines with an experience of group process and practice, tailored to the professional needs of the various disciplines that make use of the course. This course will focus on group leadership skills, cohesion and development, group performance, and handling group conflict. (fall, spring)

HDAL 4010 Managing Child Behavior (3 credits)—*Prerequisite(s): PSYC 1310 and HDAL 2310; or HDAL 2320.* A study of the theory and practice of child behavior management in family, school, and community settings. Procedures for individuals or groups and for well-adjusted or disruptive children will be presented.

HDAL 4011 Developmental Psychology II (3 credits)—*Prerequisite(s): PSYC 1310 and HDAL 2310; or HDAL 2320.* A study of human biological and behavioral development in the context of hereditary, environmental, and evolutionary influences. (fall, spring)

HDAL 4018 Honors Thesis (3 - 6 credits)—Open to those in university honor programs only. A capstone experience serving as the culmination of an honors curriculum.

HDAL 4127/5127 Divorce: Causes and Consequences (3 credits)—Explores the social-psychological impact of divorce on families. The economics, legal, social, emotional, co-parental, and former spouse consequences of divorce will be discussed. The various theoretical models explaining both the movement toward divorce, as well as the divorce

transition, will be described. Special attention will be given to the impact of divorce on children. (spring)

HDAL 4137/5137 Youth Violence – Intervention to Prevention (3 credits) —This course is designed to inform and train individuals in a variety of fields that deal with children and youth. The course is a combination of defining the concept of violence in society, evaluating current research in the field, and looking at practical strategies for developing protective factors for youth. Students will view various media representations of violence patterns and solutions, review current literature, and listen to some brief lecture material. The majority of time will be spent on student interaction with each other and the instructor.

HDAL 4260 Learning in Human Development (3 credits)—In this course students will study how major theories of learning are related to developmental changes throughout the lifespan. The merits of theories will be critically examined. Significant attention will be given to the implications and applications of the valid principles within those learning theories for various settings, including classroom, family, business, and social settings.

HDAL 4277/5277 Foundations of 21st Century Leadership (3 credits)—*Prerequisite: Permission of instructor.* Students learn key behaviors and skills critical to the success of leaders facing today's work force and economic challenges. Individual assessment, feedback, and application of new skills are emphasized. The applied nature of the course is designed for the graduate and returning adult student with significant work, professional, or military experience.

HDAL 4330 Family Management Through the Lifespan (3 credits)—*Prerequisite(s): HDAL 1110.* A study of consumer and financial management problems encountered by today's families. Emphasis placed on consumer rights and responsibilities, legislation, fundamentals of buymanship, factors influencing consumer behavior, budgeting, credit, insurance, savings, taxes, and estate planning. (fall)

HDAL 4467/5467 Leadership Studies (3 credits)—*Prerequisite: Successful completion of 60 credit hours.* The study of leadership from a historical and contemporary perspective. Students identify, apply, and reflect on aspects of leadership development, including concepts of personal change toward effective leadership in a changing environment. Topics cover personal assessment and development, values and ethics, power and influence, followership, group dynamics, controversy with civility, and citizenship. Students observe a decision-making group outside of class over the course of the semester.

HDAL 4666 Cultural Influences in Development (3 credits)—*Prerequisite(s): PSYC 1310 and HDAL 2310; or HDAL 2320.* An intensive study of familial, societal, economic, and religious influences on psychological development. The emergence of the individual person across a broad spectrum of national, ethnic, linguistic, and religious subcultures is examined. (spring)

HDAL 4817 Introduction to Psychological Testing (3 credits)—*Prerequisite(s): A course in statistics*. A history and overview of the standardized evaluation methods commonly used in the assessment of individuals and groups. Topics covered are validity, reliability, and statistical concepts for the evaluation and interpretation of test data. The student is given an overview of ability tests, interest tests, and personality tests.

HDAL 4900 Independent Study (1-3 credits)

HDAL 4950 Research in Learning and Development (3 credits)—*Prerequisite(s): PSYC 1310 and MATH 1530; or PSYC 3100.* The study and application of research methods appropriate to the behavioral sciences for consumers of developmental research. Observation, research design, and data analysis appropriate to the applied setting is emphasized. (fall, spring)

HDAL 4957/5957 Special Topics in Human Development and Learning (1-6 credits) (initial class-fall, advanced class-spring)

History
HIST

HIST 1110 World History and Civilization to 1500 (3 credits)—A general survey of the cultural, religious, political, and social development of major world civilizations from their beginnings to c. 1500.

HIST 1120 World History and Civilizations Since 1500 (3 credits)—A general survey of the cultural, religious, political, and social development of major world civilizations from 1500 to the present.

HIST 2010 The United States to 1877 (3 credits)—A survey of the settlement and development of the colonies, the revolutionary period, the making of the Constitution, the diplomatic, economic, and political problems of the new government, the nature of economic sectionalism, Jacksonian democracy, territorial expansion, the Civil War, and Reconstruction.

HIST 2018 Honors United States to 1877 (3 credits)—*Prerequisite(s): Permission of the department.* Honors course for exceptional students who wish to study in a small seminar-type class.

HIST 2020 The United States Since 1877 (3 credits)—Growth of the United States as an industrial and world power since Reconstruction.

HIST 2028 Honors United States Since 1877 (3 credits)—*Prerequisite(s): Permission of the department.* Honors course for exceptional students who wish to study in a small seminar-type class.

HIST 2030 History of Tennessee (3 credits)—An intensive study of selected periods and topics in Tennessee history.

HIST 3020 American, Ethnic, and Cultural History (3 credits)—A study of selected minority and ethnic groups in the United States with attention to geographical origin, migration patterns, and their impact on and adaptation to American culture.

HIST 3067 The American Civil War Era (3 credits)—A general survey of the American Civil War Era designed both for history and non-history majors. It deals with some of the major questions in American history from 1848 through 1877, such as why did the Civil War occur, why did the North win, how did the war impact the home fronts, was Reconstruction revolutionary, and what is the meaning of the Civil War in modern America.

HIST 3310 Ancient History (3 credits)—A survey of the origins of ancient urban civilization, including the river valley civilizations of Egypt and Mesopotamia, Israel, and Greece, with emphasis on the development of cultural, religious, political, and social institutions.

HIST 3320 Medieval History (3 credits)— Introduction to the study of medieval history from the decline of ancient civilization to the beginning of the Renaissance Emphasis on institutional and cultural development.

HIST 3330 Main Currents of Early Modern Europe (3 credits)—A study of major forces and events that shaped Europe from the mid-sixteenth century to the French Revolution, the Reformation, and wars of religion, absolutism and constitutionalism, the Scientific Revolution and the Enlightenment, and aspects of popular culture (the witchcraft craze, marriage and family life, religion).

HIST 3340 Modern Europe (3 credits)—A study of the 19th century origins of modern Europe, the development of the European industrial economy and society, diplomatic developments, and the nature of the balance of power system, Europe and the two World Wars, and the development of post-World War II Europe.

HIST 3410 Introduction to Historical Methods (3 credits)—An introductory survey of historical methods and thinking, including consideration of the philosophy of history, historiography, historical research, historical sources, and the writing of history.

HIST/APST 3510 Coal Mining in Appalachia: History and Current Issues (3 credits)—Explores the history of coal mining in Appalachia from cultural, socioeconomic, and environmental perspectives.

HIST 3710 A Survey of the Middle East (3 credits)—A survey of the land, people, and problems of the Middle East from ancient times to the modern period.

HIST 3720 History of Africa (3 credits)—An introduction to the history of the entire African continent from earliest times to the present.

Primary emphasis is placed on the achievements of Africans rather than those of foreigners in Africa.

HIST 3730 Conquest to Independence in Latin America (3 credits)—A study of the colonial period and independence movements with emphasis upon colonial and early national institutions that are of significance for understanding the peculiar mix of reaction and revolution visible in contemporary Latin America.

HIST 3740 History of Asia (3 credits)—A survey of Asian history from earliest times which stresses the formation and development of the long-lived political cultures of China and Japan, including their strategies for protecting their national sovereignty.

HIST 3900 African-American History to 1877 (3 credits)—African-American History to 1877 is a survey course which explores the political, economic, social, and cultural experiences of African-Americans, from their African roots through the Reconstruction period in America. The course will emphasize the struggle for equality along with the collective and individual contributions of African-Americans to United States and world culture.

HIST 3901 African-American History Since 1877 (3 credits)—African American History Since 1877 is a survey course which explores the political, economic, social and cultural experiences of African Americans, from United States Reconstruction to the present. The course emphasizes the Civil Rights movement, along with the struggles and achievements of African Americans.

HIST 3910 History of Christianity (3 credits)—A survey of the history of the Christian movement, from the early Church to the diverse expressions of Christianity in the modern world.

HIST 3920 History of Islam (3 credits)—A survey of pre-Islamic Arabia, the Prophet and his career, the Qur'an, doctrine and ritual, law, Sufism, sects in Islam, the Caliphate, and Islam in the modern world.

HIST 3940 War in the Modern World (3 credits)—A study of war since the 18th century, including how armies reflect the values of a society. changes in warfare in the modern era, the American way of war strategy, tactics, generalship, weapons, and the impact of war on society.

HIST 3950 Special Topics in History (3 credits)— Selected topics in the discipline. Can be repeated for credit when content changes.

HIST 3989-99 Internship/Cooperative Education (1-3 credits)

HIST 4017/5017 Beginnings of America (3 credits)—A history of the establishment of European settlements in America and the development of colonies in the 16th and 17th centuries.

HIST 4018 Honors Thesis (3-6 credits)—Open to those in university honors programs only. A capstone experience serving as the culmination of an honors curriculum.

HIST 4037/5037 The American Revolution (3 credits)—A study of the origins and development of revolutionary sentiment in 18th century America.

HIST 4047/5047 The Early Republic (3 credits)—A study of the Federalist Period, the Jeffersonian Revolution and the War of 1812.

HIST 4057/5057 The Age of Jackson (3 credits)—A study of the era of good feelings, the age of Jackson, sectionalism, and territorial expansion to the eve of the Civil War.

HIST 4067/5067 The Civil War Era (3 credits)—An advanced course in the history of the Civil War Era, with emphasis upon secession, economic and military mobilization, battles and campaigns and the cultural, diplomatic, and political developments in the period from 1840 to 1877.

HIST 4097/5097 The Emergence of United States, 1865-1933 (3 credits)— A study of the rise of big business, big labor, big government, and the agrarians in the late 19th century, the Progressive Movement, World War I, League of Nations, and the Depression.

HIST 4107/5107 Recent United States 1933-Present (3 credits)—A study of the New Deal, World War II, the significant changes in American society since the war, and the exercise of great power status in international affairs.

HIST 4127/5127 Social and Intellectual History of United States to 1877 (3 credits)—A study of selected and representative social, cultural, and intellectual themes in American history from the colonial period to the end of Reconstruction

HIST 4137/5137 Social and Intellectual History of United States Since 1877 (3 credits)—A study of selected and representative social, cultural, and intellectual themes in American history from the end of Reconstruction to the present.

HIST 4147/5147 The Old South, 1607-1860 (3 credits)—An advanced course in the history of the South from colonial times to the Civil War, with emphasis upon economic, social, and political developments, including the slavery controversy.

HIST 4157/5157 The South Since 1865 (3 credits)—A study of the recent South with special attention to its politics, economy, society, culture, and relationship to national history.

HIST 4167/5167 History of Southern Appalachians (3 credits)—A study of the political, economic, social, and cultural developments in southern Appalachia from settlement to the 20th century.

HIST 4177/5177 The West in the Life of the Nation (3 credits)—A study of westward expansion and the impact of the frontier on American institutions from the Old Southwest and Northwestern frontiers to the Pacific Coast.

HIST 4207/5207 Ancient Religions (3 credits)—A study of the origins, development, and function of religion in the ancient world of the Middle East, the Indian subcontinent, Greece and Rome. The course will cover the religions of ancient Egypt, Mesopotamia, Palestine, Greece and Rome, as well as Gnosticism, Jainism, and Zoroastrianism.

HIST 4217/5217 History of Ancient Greece (3 credits)—A study of ancient Greece from its origins in the Bronze Age through the Hellenistic Age, with special emphasis on the political, philosophical, and intellectual ideas which form the basis of Western civilization.

HIST 4227/5227 History of Rome (3 credits)—A survey of ancient Rome from its origins to the 4th century A.D., including the Regal period, the struggle of the Orders, the growth of the republic, Roman institutions, the Roman conquest of Italy, the Fall of the Republic, and the growth of autocracy, adjustments in the Empire, the early Christian church, and the culture of Rome and of its subject peoples.

HIST 4230 Renaissance and Reformation Europe (3 credits)—A survey of Europe during its transition from medieval to early modern times, with emphasis on the roots of the Renaissance culture of the fifteenth and the religious upheaval of the sixteenth centuries and their impact on institutions and behavior, including the role of women, family life, popular culture, witchcraft/the occult, and the rise of modern science.

HIST 4237/5237 Women in the Ancient World (3 credits)—A study of the history and circumstances of women in antiquity, including the cultures of Egypt, Mesopotamia, Greece, and Rome.

HIST/WMST 4247/5247 History of Women in U. S., Settlement to 1945 (3 credits)—An investigation of the social, economic, and political roles of women in the life of the nation, from European contact with Native Americans to the end of World War II.

HIST 4327/5327 Expansion of Europe Overseas, Since 1492 (3 credits)—*Prerequisite(s): HIST 1120.* A study of European expansion and its impact on the modern world.

HIST 4377/5377 European Intellectual History II (3 credits)—A study of the history of European thought from the French Revolution to the present day.

HIST 4387/5387 History of the Holocaust (3 credits)—A study of the background and origins of the Holocaust, including the legacy of anti-Semitism in Christian Europe and the emergence of racial anti-Semitism, the impact of World War I, Hitler's ideology, the racial ideas of the Nazi state. Emphasis will also be put on the decision for and implementation of the Final Solution, with emphasis on the perpetrators, victims, and bystanders, as well as how the initially limited Nazi killings

expanded into the Holocaust as we know it. Finally, the meaning and possible uniqueness of the Holocaust will be explored.

HIST 4417/5417 Methods of Teaching History (3 credits)—Content and methods for teaching history and social studies with emphasis in secondary education. This course earns education credit only and does not meet requirements for a major or minor in history or the MAT degree.

HIST 4507/5507 England to 1714 (3 credits)—A survey of English history from the Roman period to the 18th century. The course will examine the main themes of England's heritage—Christianity, medieval monarchy, common law, the Tudors—with considerable attention given to how men and women lived, worked, prayed, studied, and enjoyed life.

HIST 4517/5517 England, 1714-Present (3 credits)—A study of British history from 1688 to the present with primary attention directed to the political, economic, and social changes that led the nation from an agrarian and aristocratic kingdom to an industrial and democratic state in the 20th century.

HIST 4607/5607 History of Russia to 1917 (3 credits)—A study of politics, society, and culture in Russia from Kievan Rus to the end of Tsarism, with emphasis on the latter period.

HIST 4617/5617 History of Russia Since 1917 (3 credits)—A study of Russia, with emphasis on politics, ideology, culture, and economic development from the collapse of tsarism and the Russian Revolution through the Soviet period and the post-Soviet period, including its successor states.

HIST 4627/5627 Modern Germany (3 credits)—A study of the causes and consequences of German unification, the Bismarkian period, the Wilhelminian Age, Weltpolitik and World War I, the Weimar Republic, Hitler and the Nazi Era, and World War II and its aftermath. Emphasis will be placed on political, economic, social, and diplomatic developments.

HIST 4707/5707 East Asia Since 1900 (3 credits)—The transformation of China and Japan from regional to international economic powers.

HIST 4717/5717 Modern Middle East, 1800 - Present (3 credits)—A study of the Middle East from Napoleon through Khomeini, with emphasis on modernization trends and Islamic responses.

HIST 4727/5727 Modern Africa (3 credits)—An advanced, in-depth examination of African social, economic, political, cultural, and intellectual history since about 1880, with special emphasis on the reestablishment of African independence. The principal focus of the class may vary.

HIST 4730 Latin America: Revolution and Nationalism (3 credits)—A study of the national development of several Latin American countries (Mexico, Argentina, Chile, Cuba, and Brazil) to show some of the dramatic differences, as well as some of the common features of Latin American social, economic, and political structures today.

HIST/PSCI 4740 Seminar in China Studies (3 credits)—The seminar is necessary to allow the student to create a project that will integrate the student's work in the courses of the Minor in China Studies, including the language and study abroad option with its in-country research opportunity. The seminar is multidisciplinary, using the methodologies of History and Political Science.

HIST 4827/5827 America in the 1960s (3 credits)—The domestic history of the United States during the 1960s, with emphasis on the era's social and cultural forces Civil Rights—Martin Luther King, Jr, Malcolm X, the Black Power Movement; Social Policy—John F. Kennedy's "New Frontier", Lyndon B. Johnson's "Great Society." The impact of Vietnam and 1968 on the home front, antiwar protests, the counterculture, student rights, modern feminism, environmentalism, and the popular music and literature of the decade.

HIST 4837/5837 American Women Since World War II (3 credits)—An examination of the social, political, economic, commercial, legal, sexual, and racial issues faced by American women since the end of World War II. Topics will include the domestic containment of the 1950s, Betty Friedan's 1963 groundbreaking study, *The Feminine Mystique*, birth control, *Roe v Wade*, the origins of protest movements, women's liberation, defeat of the Equal Rights Amendment, and the rise of radical and conservative feminism.

HIST 4847/5847 American Sports, 20th Century to Present (3 credits)—An interdisciplinary study of sport in its historical context: the formation and evolution of various sports, including their economic, political, legal, gender, racial, and sexual aspects, as well as their treatment in popular literature and films.

HIST 4900 Independent Study (1-3 credits)—The Independent Study option is designed for students who would like to pursue study in areas of history not covered in the department's curriculum. Students are expected to work independently, but under the supervision of a faculty member. Students desiring to use this option must prepare for appropriate signatures, a written application with the faculty which describes course objectives, research methods (including reading list), requirements for presentation of findings of such independent study, anticipated date for completion of all requirements, and method of faculty's evaluation of the independent study project.

HIST 4910 Survey of the Modern World (3 credits)—A recapitulation and synthesis of the main themes of modern history designed to enable majors and minors to acquire a reasonable overview of the past.

HIST 4927/5927 World War II in Europe (3 credits)—A study of the background, origins, progress, and consequences of World War II in Europe. Emphasis will be placed not only on political, diplomatic, and military aspects of the war, but also on its broader social, economic, technological, and ideological ramifications.

HIST 4937/5937 World War II in the Pacific (3 credits)—A study of the origins, course and consequences of World War II in the Pacific. Emphasis will be placed not only on the political, diplomatic, and military aspects of the war but also on the racial, technological, and ideological ramifications. The course will begin with the outbreak of the Sino-Japanese War in 1937 and end with the beginning of the Cold War and the rebuilding of Japan.

HIST 4957/5957 Topics in History (1-6 credits)—A series of special interest subjects will be offered under this title on the basis of student interest and faculty capability. The course may be repeated.

Health Sciences

HSCI

HSCI 2010 Anatomy and Physiology I (4 credits)— Corequisite: HSCI 2011. An introductory course in the structure and function of the human integumentary, nervous, endocrine, skeletal, and muscular systems. Three hours lecture. (Student must also register for HSCI 2011 and receive a common grade.)

HSCI 2011 Anatomy and Physiology Laboratory I (0 credit)—*Corequisite(s): HSCI 2010. Laboratory designed to coordinate with Anatomy and Physiology I (HSCI 2010).* Consists of the study of the systems listed in HSCI 2010, using charts, models, slides, and appropriate laboratory exercises. One two-hour lab per week. (Student must also register for HSCI 2010 and receive a common grade.)

HSCI 2020 Anatomy and Physiology II (4 credits)—*Prerequisite: successful completion of HSCI 2010; corequisite: HSCI 2021.* A continuation of HSCI 2010. Includes a study of the structure and function of the human respiratory, digestive, reproductive, urinary, and cardiovascular systems. Three hours lecture. (Student must also register for HSCI 2021 and receive common grade.)

HSCI 2021 Anatomy and Physiology Laboratory II (0 credit)—*Corequisite(s): HSCI 2020.* A continuation of HSCI 2011. Laboratory will cover those systems listed under HSCI 2020. One two-hour lab per week.

HSCI 2230 Introduction to Microbiology (4 credits)—*Corequisite(s): HSCI 2231.* A survey of the principles and techniques of microbiology, parasitology, virology, immunology, and laboratory procedures, with special application to disease prevention and health maintenance. HSCI 2230/31 receives common grade.

HSCI 2231 Introduction to Microbiology Laboratory (0 credit)—*Corequisite(s): HSCI 2230.* Laboratory designed to coordinate with

Introduction to Microbiology HSCI 2230. Two one-hour laboratories per week. HSCI 2230/31 receives common grade.

HSCI 2500 HIV/AIDS: Biology and Beyond (3 credits)—A study of the social, political, and biological dimensions of HIV/AIDS. The evolution of the HIV/AIDS pandemic and its impact on society and the most current scientific knowledge regarding the biology of HIV, antiviral drugs, and vaccines will be discussed.

HSCI 3000 Human Anatomy (4 credits)—*Prerequisite(s): General biology recommended.* A systematic study of the human body with an emphasis on functional gross anatomy is presented to facilitate an understanding of body structure and function. Laboratory provides a learning experience through the use of anatomical specimens, models, and charts. Three hours lecture and lab per week.

HSCI 3006 Microbes and Human Disease (3 credits)—*Prerequisites: BIOL 1110/11, BIOL 1120/21, CHEM 1110/11, CHEM 1120/21, MATH 1530 or MATH 1910.* A fundamental understanding of the biology of microbes and how they cause disease in humans emphasizing the structure, growth, virulence properties, and diseases caused by medically important microbes.

HSCI 3020 Human Physiology (4 credits)—*Recommended Prerequisite(s): HSCI 3000.* A study of the homeostatic mechanisms in man as they pertain to normal physiology and mechanisms of disease. The teaching laboratory provides the students an opportunity to learn by measuring many of the vital physiological processes. Three hours lecture and lab per week.

HSCI 3030/31 Introductory Biochemistry (4 credits)—*Prerequisite: CHEM 1110/11 and CHEM 1120/21.* An introduction to general biochemistry of eukaryotic and prokaryotic cells. Includes study of the cell chemistry, mechanisms of energy production, enzymes, basics of macromolecular structures and transcription and translation of genetic information. Laboratory includes techniques involved in studying the biochemistry of cells. Three hours lecture and three hours laboratory per week.

HSCI 3046 Human Genetics (3 credits) — *Prerequisites: one year of college biological sciences, one year of inorganic chemistry, and MATH 1530 or 1910.* This course explores the foundations and frontiers of modern human genetics, with an emphasis on understanding the latest discoveries in this rapidly advancing field of research.

HSCI 3320 General Microbiology (4 credits)—*Recommended Prerequisite(s): One year college biological sciences and one year inorganic chemistry; Corequisite(s): HSCI 3321.* A comprehensive basic course emphasizing biological properties and natural activities. For students desiring or needing a broad background and understanding or with special interest in microbiology.

HSCI 3321 General Microbiology Laboratory (0 credit)—*Prerequisite(s): advanced courses; Corequisite(s): HSCI 3320. (Laboratory to coordinate with HSCI 3320.)* Emphasizes the distribution, isolation, cultivation, morphology, and identification of microorganisms, as well as physical and nutritional means of control. Fundamental principles and techniques. Two 2-hour labs per week.

HSCI 3510 Pathogenic Microbiology (4 credits)—*Prerequisite(s): HSCI 3320.* A lecture and lab course presenting the key concepts and mechanisms of the infectious disease process and its prevention and control with an emphasis on bacterial pathogens and how they cause disease. In addition, the laboratory component is designed to introduce the student to the basic techniques for the isolation and identification of pathogenic bacteria.

HSCI 3540 Immunology (3 credits)—A lecture presenting current concepts of the basic mechanisms of immunity and selected laboratory techniques to study the development of the immune response.

HSCI 4018 Honors Thesis (3 - 6 credits)—Open to those in university honor programs only. A capstone experience serving as the culmination of an honors curriculum.

HSCI 4067/5067 Neurology (4 credits)—*Prerequisite(s): Human or vertebrate anatomy and physiology.* A basic study of human neuroanatomy and neurophysiology. This course explores the motor and sensory pathways, as well as the integration systems of the central nervous system. Laboratory work utilizes preserved human specimens, models, slides and charts. Two hours lecture and (2) two-hour labs per week.

HSCI 4480 Clinical Parasitology (4 credits)—*Prerequisite(s): One year of biological science or equivalent.* Lecture and discussion of parasites of public health importance Life cycles, pathology, and diagnostic stages are emphasized Standard procedures of specimen collection, staining, concentration, and parasite identification are studied in the laboratory Two hours lecture and (2) two-hour labs per week.

HSCI 4590 Independent Studies (1-4 credits)—*Prerequisite(s): Upper-division status and permission of instructor and department chair.* Independent research under the supervision of staff members. A plan of the research must be approved in advance of registration. May be retaken to a total of four (4) credits.

HSCI 4607/5607 Bacterial Physiology (4 credits)—*Prerequisite(s): HSCI 3320 and Organic Chemistry required.* Completion of a biochemistry recommended. A consideration of the biochemical nature of the growth of microorganisms. Includes studies of bacterial cytology, enzymes, nutritional requirements, metabolic pathways, and genetic regulation. Laboratory includes studies of selected aspects of metabolism during bacterial growth and the use of bacterial vectors for cloning DNA. Two hours lecture and three hours laboratory per week.

HSCI 4730 Molecular and Microbial Genetics (3 credits)—*Prerequisite(s): HSCI 3320.* An introduction to microbial genetics, focusing on the genetics and molecular biology of bacteria and bacteriophages. The course will include basic techniques of microbial genetics and gene manipulation with emphasis on the application of molecular genetics in basic and applied research.

HSCI 4747/5747 Mycology (4 credits)—*Prerequisite(s): HSCI 3320 and Organic Chemistry*. A survey of the fungi with emphasis on form, structure, genetics, growth and nutrition, classification, ecology, and economic importance. The fundamentals of general mycology and the procedures used for the isolation and identification of fungi including yeasts, mold, and actinomycetes are investigated in the laboratory. Two hours lecture and (2) two-hour labs per week.

HSCI 4770 Virology (4 credits)—*Prerequisite(s): HSCI 3320 or equivalent.* An introduction to the pathogenesis and molecular biology of viruses including methods of isolation, cultivation, and characterization. Two hours lecture and (2) two-hour labs per week.

HSCI 4957/5957 Special Topics in Health Sciences (1-6 credits)—*Prerequisite(s): Dependent on subject matter.* Selected topics in health sciences Offered upon sufficient demand for specific subject matter. May be repeated for different topics. Consultation with the instructor is recommended before enrollment.

HSCI 4989-99 Internship/Cooperative Education (1-3 credits)

Humanities

HUMT

HUMT 1218 Honors Quest for Meaning and Values I (3 credits) — Open to those in the Honors Scholars Program only. A rigorous course in the humanities that aims at deepening skills of critical reading and writing and at cultivating a broad cultural literacy. (fall)

HUMT 2310 Arts and Ideas I (3 credits)—An examination of the arts and ideas of ancient and medieval cultures. (fall, spring, summer)

HUMT 2320 Arts and Ideas II (3 credits)—An examination of the arts and ideas of modern cultures. HUMT 2310 is not a prerequisite for this course. (spring)

HUMT 4930 Independent Studies in Humanities (3 credits) (fall, spring)

HUMT 4950 Senior Seminar (3 credits) (spring, even years)

Mathematics and Natural Sciences

IMBS

IBMS 1100 Integrative Biology and Statistics (6 credits) — *Prerequisites: High school Algebra and/or Precalculus; approval of the instructor.* This course integrates biological concepts from evolution, cellular biology, Mendelian genetics, and molecular genetics with probability and statistics concepts and skills. Five lectures/week and one 2-hour lab/week.

IBMS 1200 Integrative Biology and Calculus (6 credits) — *Prerequisite: IBMS 1100.* This course integrates biological concepts from population biology, ecology, neurobehavior, and membrane function with concepts and skills from Calculus. Five lectures/week and one 2-hour lab/week.

Interior Design
INTD

INTD 1105 Interior Design Fundamentals (3 credits)—An introduction and overview to the interior design profession including history, building systems, design fundamentals, design process, space planning, and interior finishes and materials.

INTD 1115 Architectural Drafting: Studio I (4 credits)—An introduction to hand drafting and to lettering standards including terminology, symbols, orthographic drawings, and schedules within a construction document.

INTD 1205 Sustainable Design (3 credits)—*Prerequisite(s): INTD 1105 and INTD 1115.* A global perspective in the study of sustainable building theory, principles, and design practices and its application to interior design.

INTD 1215 Visual Communication: Studio II (4 credits)—*Prerequisite(s): INTD 1105, 1115, DIGM 1100.* An introduction to three-dimensional sketching techniques that promote creative, visual, and volumetric thinking. Rapid visualization, illustrative sketching, rendering, perspectives, and paraline drawings are emphasized. Studio experience included.

INTD 2105 Historical Interiors I (3 credits)—A historical survey of interiors from antiquity through the 19th century; emphasizing the influence on today's interiors and architecture. (fall)

INTD 2110 Design for Human Behavior (3 credits)—*Prerequisite(s): INTD 1205 and 1215.* Exploration of the relationships between the designed environment and the behavior, feelings, and values of occupants. Introduction to proxemics, territoriality, way finding, and other environment/behavior theories.

INTD 2115 Interior Design Presentation: Studio III (4 credits)—*Prerequisite(s): INTD 1215.* Introduction and application of oral and graphic presentations of interior design solutions communicated through the use of sample boards, collages, mock-ups, digital and hand presentations, portfolios, and/or 3D models.

INTD 2205 Historical Interiors II (1-3 credits)—*Prerequisite(s): INTD 2105.* A historical survey of interiors from 19th century through present day emphasizing the influence on today's interiors and architecture.

INTD 2210 Materials and Finishes (3 credits)—*Prerequisite(s): ENTC 2410 and INTD 2115.* Study of fibers, textiles and other finish materials and components of interior spaces such as paints, carpet, flooring, and wall treatments with application to residential and commercial interiors. Appropriate selection, installation, specification, and cost estimating are emphasized.

INTD 2215 Residential Design: Studio IV (4 credits)—*Prerequisite(s): INTD 2110, 2115, and ENTC 2410.* Design studio experience in residential interiors. Emphasis on problem solving within the design process, building codes, universal and barrier-free design, and sustainable design.

INTD 3105 Interior Building Systems & Components (3 credits)—*Prerequisite(s):* INTD 2210 and 2215. The study of interior building systems and components and their impact on the development of interior spaces. Emphasis on identifying, interpreting, drawing, and specifying interior building systems and components in contract documents that complete the building interior.

INTD 3115 AutoCAD for Interior Design: Studio V (4 credits)—*Prerequisite(s): INTD 2215.* Computer-aided 2D and 3D architectural drafting and rendering through the use of AutoCAD and 3rd party rendering software.

INTD 3205 Lighting (3 credits)—*Prerequisite(s): INTD 3105, 3115.* An examination of the technical and decorative aspects of lighting, including principles, terminology, design requirements, and equipment utilized in interior environments. Students explore human visual perception, methods of light generation, fixtures and control, selection and specification, energy issues, and visual communication of lighting designs.

INTD 3215 Commercial Design: Studio VI (4 credits)—*Prerequisite(s): INTD 3105 and INTD 3115.* The study and application of the design process, codes, standards, and federal regulations pertaining to the interior of commercial buildings.

INTD 4105 Professional Practices in Interior Design (3 credits)—*Prerequisite(s): INTD 3215.* A study of the professional business practices of interior design: contracts, ethics, responsibilities, liabilities, etc. Emphasis includes development of professional portfolio, resume, and multiple marketing tools to support career strategies.

INTD 4115 Mixed-use Design: Studio VII (4 credits)—*Prerequisite: INTD 3215.* Application of the design process based on social research to plan mixed-use environments for children, the elderly, physically challenged, or other special populations.

INTD 4205 Interior Design Internship (3-9 credits)—*Prerequisite(s): INTD 3215 and permission of the instructor.* Supervised, multi-faceted experience in which creative and technical skills are applied within a project based environment.

INTD 4215 Senior Design Studio: Studio VIII (4 credits)—*Prerequisite(s):* Specialized and in-depth senior studio concluding in a comprehensive, culminating project that applies knowledge and skills needed for entry into the interior design profession.

INTD 4957/5957 Special Topics in Family and Consumer Sciences 1-6 credits)—Selected subjects in student's area of interest in areas not included elsewhere in course offerings. May be repeated for credit when content varies. (as needed)

International Studies
INTL

INTL 2000 Introduction to International Studies (2 credits)—An academic introduction to systematic study of the world as an economic, physical, political, and social unit. Students will consider a variety of approaches to such a study and will plan a course of study, which will lead to a senior seminar paper.

INTL 4000 International Studies Senior Seminar (1 credit)—Students and their project advisors will meet one hour a week. Students will consider methodological questions in writing papers in International Studies. Successful completion of this course requires the formal presentation of a senior seminar paper.

Japanese
JAPN

JAPN 1010 Beginning Japanese I (3 credits)—Introduction to the Japanese language, both spoken and written, and to the culture and customs.

JAPN 1020 Beginning Japanese II (3 credits)— *Prerequisite: A grade of at least C- in JAPN 1010 or with consent of the coordinator for Japanese.* Introduction to the Japanese language, both spoken and written, and to the culture and customs.

JAPN 2010 Second-Year Japanese I (3 credits)—*Prerequisite: A grade of at least C- in JAPN 1020 or with consent of the coordinator for Japanese.* A continuation of the first year.

JAPN 2020 Second-Year Japanese II (3 credits)—*Prerequisite: A grade of at least a C- in JAPN 2010 or with the consent of the coordinator for Japanese.* A continuation of the first year.

JAPN 3015-25 Japanese Conversation and Composition (3 credits)—Practice in conversation, with emphasis on idioms, syntax, and current expressions. Study of grammar through written compositions.

JAPN 4015-25 Advanced Japanese (3 credits)—Emphasis on all four skills speaking, listening, writing, and reading. Study of syntax and idiomatic expressions through reading materials.

JAPN 4975 Topics in Japanese (3 credits)—This course gives students an opportunity to study special topics in the field of Japanese.

Journalism
JOUR

JOUR 2050 History and Issues of Journalism (3 credits)—Examination of the evolution of ethical and historical issues that have shaped the field of journalism.

JOUR 2120 Writing for Print Media I (3 credits)—*Prerequisite(s): Completion of ENGL 1010, ENGL 1020, and ability to type.* Instruction and practice in fundamentals of journalistic writing, with main emphasis on format and style of news stories.

JOUR 2130 Writing for Print Media II (3 credits)—*Prerequisite(s): JOUR 3150.* Instruction and extensive laboratory practice in newspaper reporting. Focus is on gathering information, interviewing, and writing news and feature stories. Campus beats are covered, and most stories are considered for publication in the university's student newspaper. Because of lengthy lab sessions, students may need to consult with the instructor to work out schedules before enrolling.

JOUR 3120 Opinion Writing (3 credits)—*Prerequisite(s): A grade of "C" or better in JOUR 2130.* Besides editorials and interpretive writing about public affairs and current events, the course explores types of opinion writing such as news analysis, personal columns and critical reviews.

JOUR 3130 In-Depth Reporting (3 credits)—*Prerequisite(s): A grade of "C" or better in JOUR 2130.* State-of-the-art, hands-on course that addresses how to produce in-depth and investigative stories from story conception to library research, to interviewing local, state, and national experts, and finally putting the story or series of stories in a cogent package. Use of computer-based reporting operations emphasized.

JOUR 3150 Copy Editing (3 credits)—*Prerequisite(s): A grade of "C" or better in JOUR 2120.* Instruction and practice in editing copy for print media and in headline writing.

JOUR 3160 Newspaper Design (3 credits)—*Prerequisite(s): JOUR 3150 or permission of instructor.* Lecture-laboratory instruction in preparation of camera-ready pages with computers to achieve pagination. Principles and methods of organizing and integrating information for the reader.

JOUR 3301 Photojournalism (3 credits)—Basic visual and technical aspects of photojournalism along with exercises in general news events, sports, features, and other newspaper and magazine subjects Includes digital camera and photoshop techniques.

JOUR 3350 Advanced Photojournalism (3 credits)—*Prerequisite(s): JOUR 3301 or permission of instructor.* Advanced study in photojournalism concentrating on the newspaper and magazine story, advanced digital camera, and photoshop techniques.

JOUR 3430 Magazine Article Writing (3 credits)—*Prerequisite(s): JOUR 2120 or permission of instructor.* Writing nonfiction articles for consumer magazines, as well as business, trade, and professional publications.

JOUR 4080 Journalism Internship (3 credits)—*Prerequisite(s): Permission of instructor.* Supervised professional experience in journalism.

JOUR 4107/5107 Reporting Public Affairs (3 credits)—*Prerequisite(s): A grade of "C" or better in JOUR 2130.* Instruction and practice in coverage of local, county, and state governments, the court system, and law-enforcement agencies. May include field trips for which students must defray personal expense.

JOUR 4420 Magazine Editing and Production (3 credits)—*Prerequisite(s): JOUR 3150 or permission of instructor.* Lecture-laboratory tracing the magazine from original manuscripts to completed production. Lab makes use of computers to produce camera-ready magazine with illustrations.

JOUR 4900 Independent Studies in Journalism (1-3 credits)

JOUR 4957/5957 Topics in Journalism (1-6 credits)

Foreign Languages
LANG

Also see CHIN, FREN, GERM, JAPN, LATN, SPAN

METHODS

LANG 4417/5417 Teaching of Modern Languages (3 credits)—For seniors preparing to teach French, German, and Spanish. Topics include methodology and current trends in second language education and their application.

Latin
LATN

LATN 1010-20 Beginning Latin (3 credits)—Introduction to Latin vocabulary, syntax, conjugations, and declensions, working toward prose and poetry.

LATN 2010-20 Second-Year Latin (3 credits)—A continuation of first year, with reading from Latin prose and poetry and some prose composition.

Mathematics
MATH

(See Developmental Studies for below college-level courses.)

Special Requirement Students in mathematics courses may be required to possess a designated hand-held calculator with functions appropriate to the course.

MATH 1410 Number Concepts and Algebraic Structure (3 credits)—*Prerequisite(s): Two years of high school algebra and one year of high school geometry or the equivalent.* This course will (1) investigate the role of numbers as a logical and predictable system for expressing and relating quantities and (2) explore a variety of functional relationships which arise from diverse problem situations.

MATH 1420 Logic, Problem Solving and Geometry (3 credits)—*Prerequisite(s): MATH 1410 or permission of instructor.* Logic and problem solving will be used to discover geometric concepts. Examples from theorems of great mathematicians of the past will be studied. Students will be expected to understand and construct logical arguments. Use of technology to explore geometric relationships will be an integral part of the course.

MATH 1530 Probability and Statistics - Noncalculus (3 credits)—*Prerequisite(s): Two years of high school algebra.* Descriptive statistics and its relevance, including probability, experimentation, measurement, sampling and surveys, informal statistical inference, and hypothesis testing are included.

MATH 1710 Precalculus I (Algebra) (3 credits)—*Prerequisite(s): Two years of high school algebra.* The real number system, linear and quadratic equations, Cartesian coordinates, systems of equations, and applications.

MATH 1720 Precalculus II (Trigonometry) (3 credits)—*Prerequisite(s): Two years of high school algebra, MATH 1710, or the equivalent.* A study of functions and their graphs, including polynomial and rational functions, exponential and logarithmic functions, and trigonometric functions.

MATH 1840 Analytic Geometry and Differential Calculus (3 credits)—*Prerequisite(s): MATH 1720 or two years of high school algebra and high school trigonometry.* A course in differential calculus with technical applications. Analytic geometry, quadratic equations, and additional topics in trigonometry as foundation to the calculus, limits, the derivative, and applications.

MATH 1850 Integral Calculus for Technology (3 credits)—*Prerequisite(s): MATH 1840.* A course in integral calculus with technical applications. Sequences and series, the integral, exponential and logarithmic functions, and differentiation and integration of transcendental functions.

MATH 1910 Calculus I (4 credits)—*Prerequisite(s): Two years of high school algebra, one year of plane geometry and trigonometry, or MATH 1720.* Functions, limits of functions, derivatives and applications, and introduction to the integral.

MATH 1920 Calculus II (4 credits)—*Prerequisite(s): MATH 1910*. Applications of the integral, inverse trigonometric functions, exponential and logarithmic functions, techniques of integration, indeterminate forms and improper integrals, sequence, and series.

MATH 2010 Linear Algebra (3 credits)—*Prerequisite(s): MATH 1840, or MATH 1910*. Systems of linear equations, matrix algebra, inner products, vector spaces, linear transformations, eigenvalues, and three-space vector geometry.

MATH 2050 Foundations of Probability and Statistics - Calculus Based (3 credits)—*Prerequisite(s): MATH 1910*. A calculus-based introduction to probability and statistical inference. Basic probability concepts, mathematical expectation, discrete and continuous probability distributions, sampling distributions, one and two-sample estimation, and hypothesis testing techniques will be developed and used; linear regression and correlation.

MATH 2090 Mathematical Computing (2 credits)—Designed to introduce mathematics majors to the use of software tools and programming languages in the mathematics discipline. Spring

MATH 2110 Calculus III (4 credits)—*Prerequisite(s): MATH 1920*. Conics, parametric equations and polar coordinates, vectors and vector-valued functions, multivariate calculus.

MATH 2120 Differential Equations (3 credits)—*Prerequisite(s): MATH 1920 and MATH 2010*. First order differential equations and applications. Second and higher order linear differential equations and applications; Laplace transforms, systems of differential equations. Spring

MATH 2190 Introduction to Computational Biology (3 credits)—This course introduces students to the general concepts of calculus, probability theory, fractals, game theory and other mathematical tools to ecology, evolution, genetics and genomics. Concepts covered may include equilibrium, stability, emergence of complexity, hypothesis testing, Bayesian inference, genetic algorithms etc.

MATH/BIOL 2390 Introduction to Research in Quantitative Biology (3 credits)—*Prerequisite(s): Permission of the instructor.* Students rotate between a Biological Sciences lab and the Mathematics Department. Students learn math needed to support research in biology. One rotation per semester, consisting of one research experience in each department. The course may be repeated once.

MATH 2710 Discrete Structures (3 credits)—*Prerequisite(s): MATH 1840 or MATH 1910*. Set theory, mathematical induction and recursion, relations and digraphs, functions, trees and languages, semigroups, finite-state machines, and languages.

MATH 2800 Mathematical Reasoning (3 credits)—*Prerequisite(s): MATH 1920 and MATH 2010*. Introduction to mathematical methods of proof using primarily the subjects of logic, set theory, number theory, and topology.

MATH 2989 Internship/Cooperative Education (1-3 credits)—*Prerequisite(s): MATH 2110 and MATH 2010*. Designed for students who wish to pursue a temporary apprenticeship or experiential activity in a cooperative endeavor with an approved agency.

MATH 3040 History of Mathematics (3 credits)—*Prerequisite(s): MATH 2110, MATH 2800, and MATH 2010*. A study of mathematics and those who contributed to its development. Recommended for teachers and those desiring to expand their view of mathematics.

MATH 3050 Statistical Modeling (3 credits)—*Prerequisite(s): MATH 2050 and MATH 2010*. An introduction to linear multiple regression and one-way ANOVA using matrices. Other models include logistic regression, random walks, and autoregressive models. Spring

MATH 3120 Elementary Number Theory (3 credits)—*Prerequisite(s): MATH 2800 and junior or senior status*. Introduction to number theory, treating divisibility, congruencies, linear Diophantine equations, and quadratic residues. Some history of the development of the discipline will also be included.

MATH 3150 Mathematical Modeling (3 credits)—*Prerequisite(s): MATH 2120*. This course is an introduction to birth and death processes, equilibria, optimal control, and probabilistic models. Emphasis will be given to criteria for accepting, rejecting, and modifying models. Fall

MATH 3340 Applied Combinatorics and Problem Solving (3 credits)—*Prerequisite(s): MATH 2800*. Topics include basic counting techniques, generating functions, recurrence relations, and applications. Fall

MATH 4010 Undergraduate Research (3 credits)—*Prerequisite(s): MATH 2800 and approval of faculty members teaching course.* A capstone experience serving as the culmination of the mathematics curriculum. Students will work on research problems under the direction of mathematics faculty members. Honors students should take MATH 4018 instead.

MATH 4018 Honors Thesis (3-6 credits)—Open to those in university honors programs only. A capstone experience serving as the culmination of an honors curriculum.

MATH 4027/5027 Introduction to Applied Mathematics (3 credits)—*Prerequisite(s): MATH 2010, MATH 2110, and MATH 2120*. This course is an introduction to partial differential equations and their relationship to Fourier series, vector calculus, and special functions.

MATH 4047/5047 Mathematical Statistics I (3 credits)—*Prerequisite(s): MATH 2050, MATH 2010 and MATH 2110*. An introduction to the theory of probability and mathematical statistics. Topics will include discrete and continuous probability distributions and their applications, mathematical expectation and moment generating functions, functions of random variables and transformations, sampling distributions, the central limit theorem, Chi-square, T and F distributions. Fall

MATH 4057/5057 Mathematical Statistics II (3 credits)—*Prerequisite(s): MATH 4047 or MATH 5047*. A continuation of Mathematical Statistics I. An introduction to the theory of mathematical statistics, estimation, and hypothesis testing. Topics will include efficiency, consistency, sufficiency, robustness, methods of estimation, confidence intervals, Bayesian inference as well as the Neyman-Pearson lemma, power functions, likelihood ratio tests, hypothesis tests, and applications. Spring

MATH 4127/5127 Introduction to Modern Algebra (3 credits)—*Prerequisite(s): MATH 2010 and MATH 2800*. Introduction to the basic algebraic systems, including groups, rings, integral domains, and fields. Fall

MATH 4137/5137 Introduction to Modern Algebra II (3 credits)—*Prerequisite(s): MATH 4127/5127*. The study of rings is continued to include topics of factor rings, ideals and factorization. The study of field theory is expanded to include extension fields and splitting fields, time permitting; Sylow theory is included. Spring

MATH 4157/5157 Introduction to Modern Geometry (3 credits)—*Prerequisite(s) or Corequisite(s): MATH 2010 and MATH 2800*. An introduction to Euclidean and non-Euclidean geometries, emphasizing the distinction between the axiomatic characterizations, and the transformational characterizations of these geometries. Some history of the development of the discipline will also be included.

MATH 4217/5217 Analysis I (3 credits)—*Prerequisite(s): MATH 2110 and 2800*. Elements of point set topology, limits and continuity, differentiability, Taylor's theorem, approximation, Riemann integral. Fall

MATH 4227/5227 Analysis II (3 credits)—*Prerequisite(s): MATH 4217*. Infinite sequences and series, power series, real-valued functions of several variables, vector-valued functions of several variables, implicit function theorem, integral of multivariate functions. Spring

MATH 4257/5257 Numerical Analysis (3 credits)—*(Co-listed in Computer Science) Prerequisite(s): MATH 1920 and MATH 2010*. Floating point arithmetic and error propagation, numerical solution to functions of a single variable and functional approximation, numerical differentiation and integration, program design, coding, debugging, and execution of numerical procedures. Fall

MATH 4267/5267 Numerical Linear Algebra (3 credits)—*(Co-listed in Computer Science) Prerequisite(s): MATH 1920 and 2010*. Direct and iterative techniques for solving systems of linear equations, curve fitting, and eigenvalue-eigenvector methods. Spring

MATH 4287/5287 Applications of Statistics (3 credits)—*Prerequisite(s): MATH 1530, MATH 2050, MATH 4047, or permission of instructor.* An applied course in statistical methods with emphasis on the selection of an appropriate method, the required assumptions, and applications using statistical software. Comparison of two groups by parametric, nonparametric, and computer intensive methods. Analysis of variance (ANOVA), multiple regression, tests for two-way tables, odds ratio, and relative risk logistic regression. This course is recommended for graduate students from other disciplines who wish to apply statistics and to math majors interested in statistical applications and consulting.

MATH 4307/5307 Sampling and Survey Techniques (3 credits)—*Prerequisite(s): MATH 1530, or 2050, or 4047, or permission of instructor.* Topics to be selected from survey designs, simple random, stratified and systematic sampling, questionnaire construction, interviewing techniques, methods of estimation and costs.

MATH 4327/5327 Time Series Analysis (3 credits)—*Prerequisite(s): MATH 2050 or equivalent.* Methods for analysis of observations taken at equally spaced moments in time. Exploratory analysis of time series, decomposition approach, exponential smoothing and regression, time domain approach (ARIMA models), forecasting, introduction to the frequency domain approach, periodogram, and spectrum.

MATH 4337/5337 Complex Variables (3 credits)—*Prerequisite(s): MATH 1920 and MATH 2010.* Complex numbers and their algebra, complex differentiation and integration, analytic and elementary functions, residues and power series.

MATH 4347/5347 Introduction to Graph Theory with Applications (3 credits)—*Prerequisite(s): MATH 2800.* Topics include graph theory and applications, trees, planar graphs, graphical invariants, and networks. Spring

MATH 4357/5357 Introduction to Topology (3 credits)—*Prerequisite(s): MATH 2800.* Open and closed sets, continuous functions, metric spaces, connectedness, continuous functions, metric spaces, connectedness, compactness, the real line, and the fundamental group.

MATH 4377/5377 The Theory of Interest (3 credits)—*Prerequisite(s): MATH 2110 or the equivalent, or permission of instructor.* Topics include measurement of interest, accumulated and present value factors, annuities certain, yield rates, amortization schedules, and sinking funds and bonds, and related securities.

MATH 4387/5387 Actuarial Mathematics I (3 credits)—*Prerequisite(s): MATH 2050 and MATH 4377/5377 or equivalent; or permission of instructor.* Topics include survival distributions and life tables, life insurance, life annuities, benefit premiums, benefit reserves, and analysis of benefit reserves.

MATH 4397/5397 Actuarial Mathematics II (3 credits)—*Prerequisite(s): MATH 4387/5387 or permission of instructor.* (A continuation of MATH 4387/5387) Topics include multiple life functions, multiple decrement functions, applications of multiple decrement theory, insurance models including expenses, and business and regulatory conditions.

MATH 4417/5417 Teaching of Secondary Mathematics (3 credits)—*Prerequisite(s) or Corequisite(s): MATH 4127 and MATH 4157.* Introduction to methods and materials appropriate to the teaching of secondary school mathematics. Topics include mathematics problem solving, integration of computing technology into mathematics instruction, systematic study of the foundations of secondary mathematics, and a survey of ideas and techniques associated with planning, delivering, and evaluating instruction in mathematics. Fall

MATH 4900 Independent Study (1-6 credits)—*Prerequisite(s): MATH 4127.* Designed for students who would like to pursue a study of an area of mathematics not covered in the curriculum. Students are expected to work independently, but under the close supervision of an instructor. A paper presenting their findings is required.

MATH 4957/5957 Topics in Mathematics (1-6 credits)—*Prerequisite(s): MATH 2110 and MATH 2010.* Selected topics of current interest in mathematics. Offered upon sufficient demand for specified subject matter. May be repeated twice for different topics. Consultation with the instructor is recommended before enrollment.

MATH 4989 Internship/Cooperative Education (1-3 credits)—*Prerequisite(s): MATH 4127.* Designed for students who wish to pursue a temporary apprenticeship or experiential activity in a cooperative endeavor with an approved agency.

MATH 4999 Internship/Cooperative Education (1-3 credits)—Same as above.

Mass Communications
MCOM

The department will accept no more than 12 semester credits or the equivalent in Mass Communications courses for transfer to be applied toward the degree.

MCOM 1030 Introduction to Mass Communications (3 credits) – Nature, functions, responsibilities of mass communications media and agencies. Survey of newspapers, magazines, radio, television, film, advertising, public relations, press associations, and specialized publications.

MCOM 2989-3989-3999 Internship/Cooperative Education (1-3 credits)

MCOM 3070 Mass Media and Society (3 credits)—The nature and functions of mass communications, including an appraisal of the performance of mass media in society. Study of mass media problems, audiences and effects, and consideration of different theories and systems of media dissemination of news, opinion, and information.

MCOM 4018 Honors Thesis (3 credits)—Open to those in university honors programs only. A capstone experience serving as the culmination of an honors curriculum.

MCOM 4037/5037 Communications Law (3 credits)—Statutory law and judicial precedents affecting mass communication media, libel, contempt of court, invasion of privacy, copyright, broadcasting, advertising, and postal regulations.

MCOM 4040 Seminar in Mass Communications (1-6 credits)—A study of recent literature on developments and trends in mass communications. May be repeated.

MCOM 4900 Independent Studies in Mass Communications (1-3 credits)

MCOM 4957/5957 Topics in Mass Communications (1-6 credits)

MCOM 4989 Internship/Cooperative Education (1-3 credits)

Educational Media and Educational Technology
MEDA

MEDA 3570 Educational Technology (2 credits)—*Prerequisite(s): Admission to teacher education and completion of one of the following: CUAI 2440, CSCI 1100 or Information Technology Proficiency Exam.* This course prepares students to use educational technology in the classroom.

MEDA 4637/5637 Young Adult Materials (3 credits)—Analysis, evaluation, and use of library media for young adults of junior and senior high school age in relation to their needs, interests, and the school curriculum.

MEDA 4957/5957 Topics in Instructional Media (1-6 credits)—*Prerequisite(s): Dependent on subject matter.* Selected topics of current interest in media or technology. Offered upon sufficient demand for specific subject matter. May be repeated for different topics. Consultation with the instructor is recommended before enrollment.

Management
MGMT

Note: All students enrolling in 3000- and 4000-level (upper-division) College of Business and Technology courses must have junior or senior standing.

MGMT 3000 Organizational Behavior and Management (3 credits)—*Prerequisite(s): Junior standing.* An introduction to the managerial process emphasizing organizational behavior, theory and development, and decision-making in complex organizations. (fall, spring, summer)

MGMT 3050 Decision Science (3 credits)—*Prerequisite(s): ECON 2080 and junior standing.* An introduction to basic management science methods emphasizing application and interpretation by managers. Topics include model-building process, decision theory, Bayesian decision analysis,

linear programming methods including the simplex method and assignment and transportation models, basic inventory and production models, queuing models, and Monte Carlo simulation. Computer program packages are used. (fall, spring, summer)

MGMT 3100 Production/Operations Management (3 credits)—*Prerequisite(s) or Corequisite(s): MGMT 3000 and MGMT 3050*. An introduction to the design, operation, and control of productive systems in both manufacturing and service organizations. Topics include product, process, plant, technology, and personnel decisions, logistics, production, inventory, quality, and cost control systems. (fall, spring, summer)

MGMT 3200 Organizational Communications (3 credits)—*Prerequisite(s): Junior standing*. The various oral and written media and channels essential to organizational communications are examined. Guidelines for application and evaluation are presented with emphasis on the situational effectiveness of each medium and channel.

MGMT 3220 Management Information Systems (3 credits)—*Prerequisite(s): CSCI 1100 and MGMT 3000*. Integrates topics of management and organization theory, information and communication theory, and systems theory relevant to managing an organization's information resources. Includes computer and database concepts and emphasizes the design, analysis, operation, and control of information systems to aid management decision-making. (fall, spring, summer)

MGMT 3300 Written Organizational Communications (3 credits)—*Prerequisite(s): Junior standing*. The application of theory to the forceful composition of business communications. Intensive development of skills to prepare effective business letters, memos, and reports. Particular attention will be given to technical language. (fall, spring, summer)

MGMT 3310 Legal Environment of Business (3 credits)—*Prerequisite(s): Junior standing*. An introduction to our legal system with its impact on business. Business problems with legislation, judicial decisions, and governmental regulation are examined with special emphasis upon securities transactions, business taxes, and the Sherman, Clayton, and Robinson-Patman Acts.

MGMT 3320 Management and Social Responsibility (3 credits)—*Prerequisite(s): MGMT 3310*. A study of the legal and ethical aspects of business dealings with respect to employees, the environment, consumers, suppliers, distributors, and the general community.

MGMT 3330 Law of Commercial Transactions (3 credits)—*Prerequisite(s): MGMT 3310*. A survey of the law of commercial transactions including contracts, sales and agency partnerships, corporations, commercial paper, secured transactions, and bankruptcy The course should be helpful in giving one a general knowledge of the substantive law of business and in preparing for the law section of the CPA exam.

MGMT 3340 Law and Intellectual Property for Musicians (3 credits)—The course examines all the legal issues that artists, musicians, engineers, and producers encounter:from artist contracts, recording and music publishing agreements to copyright law, name protection and business organization. It presents a focused look at the important legal changes that have evolved as a result of the shift in the music business landscape.

MGMT 3650 Supply Chain Management (3 credits)—*Prerequisite(s): MGMT 3000*. A comprehensive course dealing with an approach to analyzing and managing logistics networks that improve a company's competitive position in the global marketplace. Issues dealing with resource flows through the supply chain will be discussed in lectures and cases. (spring)

MGMT 3660 Introduction to Project Management (3 credits)—*Prerequisite(s): MGMT 3100*. This course addresses project management from a management perspective rather than an engineering or mathematical perspective. It deals with the basic nature of managing projects, selecting projects, initiating them, operating and controlling projects, and terminating projects. The students should understand the demands made on the project manager and the nature of the manager's interaction with the rest of the parent organization.

MGMT 4010 Advanced Organizational Behavior (3 credits)—*Prerequisite(s): MGMT 3000 and a declared major*. A behavioral science approach to organizational management problems created by the interaction of individuals and organizations. Topics examined include motivation, leadership, organizational change, and development. (fall, spring)

MGMT 4018 Senior Honors Seminar (3-6 credits)—*Prerequisite(s): ECON 3088 and admission to the College of Business and Technology Honors Program*. A seminar for College of Business and Technology honors students who are working on senior honors theses or other approved projects. Upon successful completion of the course, students will have demonstrated the ability to complete the research process by creating a written product suitable for submission to the College of Business and Technology faculty. (fall, spring)

MGMT 4020 Organizational Theory and Development (3 credits)—*Prerequisite(s): MGMT 3000*. The study of the structure and functioning of organizations and an examination of the interactive effects of people, technology, and environment on the organization. (fall, spring, summer)

MGMT 4030 Current Management Issues (3 credits)—*Prerequisite(s): Junior standing and MGMT 3000*. A course designed to teach students in specific up-to-date issues tailored to their specific degree requirements. Areas such as total quality management, continuous improvement, team building, quick response, efficient customer response, enterprise resource planning, and business process re-engineering are developed through lectures and case studies to show the student real-world application. (fall, spring)

MGMT 4210 Systems Analysis and Design (3 credits)—*Prerequisite(s): MGMT 3220*. An overview of systems developments techniques including the life cycle and prototyping. There will be an emphasis on the techniques and tools of system documentation and logical system specification. This course will incorporate management practices and principles as they pertain to the analysis, design, and implementation of information systems.

MGMT 4217/5217 Service Operations Management (3 credits)—*Prerequisite(s): MGMT 3100 or permission of instructor*. Application of operations management principles within the service environment, and illustrating new information technologies as strategic elements of service operations. Topics include managing services, structuring and scheduling, continuous improvements in quality and productivity. Quantitative models and case analysis will be included.

MGMT 4317/5317 Materials Management (3 credits)—*Prerequisite(s): MGMT 3100*. Design of information, forecasting, planning, and control systems for allocating resources and scheduling activities. Topics include operations information systems, forecasting, aggregate output planning, inventory control, materials requirements planning, and shop scheduling. (spring)

MGMT 4327/5327 Decision Modeling and Simulation (3 credits)—*Prerequisite(s): CSCI 1100 and MGMT 3100*. Concepts and methods for building and processing models which produce information about the behavior of complex organizational systems to support management decisions. Topics include simulation of inventory and queuing systems, flow-graphs, process generators, GPSS, management planning, and network models.

MGMT 4330 Data Management (3 credits)—*Prerequisite(s): MGMT 3220*. A survey of database management systems and data communication systems with focus on the managerial aspects of treating data as a resource. Introduction to file organization techniques, data structures, data manipulation languages, query languages, the relational database model, data communication concepts, networks, and management of distributed information systems. (summer)

MGMT 4347/5347 Labor Relations/Collective Bargaining (3 credits)—*Prerequisite(s): ECON 2210 and ECON 2220*. A study of the organization of labor and management for collective bargaining. The subject matter for bargaining and bargaining procedures. A special study will be made of the laws affecting collective bargaining. (fall, spring, summer)

MGMT 4357/5357 CIM Applications (3 credits)—*Prerequisite(s): Junior standing.* An interdisciplinary course concerned with the concepts of business, computers, and manufacturing designed to explore the integration of these dynamic disciplines in the development of the Computer-Integrated Enterprise Field trips, and demonstrations will be used to support the lectures. (fall, spring)

MGMT 4420 Law of Business Organizations (3 credits)—*Prerequisite(s): MGMT 3310*. A study of the laws governing sole proprietorships, partnerships, corporations, limited liability companies, and other types of business organizations. The legal duties and powers of officers, partners, board of directors, member-managed boards, member employees, and shareholders are examined, as well as legal liability for business actions under civil and criminal law, including the federal criminal sentencing guidelines for organizations and methods to reduce civil and criminal liability.

MGMT 4430 Manufacturing and Technology Law (3 credits)—*Prerequisite(s): MGMT 3310*. An in-depth study on protecting company inventions, products, and confidential information by coverage of the laws applicable to trade secrets, patents, copyrights, trademarks, and trade dress, as well as confidentiality and non-compete agreements. Also covered are product liability law and other legal claims that may arise from the production and sale of products and technology-based services such as computer software and technical advice.

MGMT 4440 Governmental Regulation of Business (3 credits)—*Prerequisite(s): MGMT 3310.* An examination of the functions of federal administrative agencies as defined by statutes, the Administrative Procedures Act, and judicial decisions, and their impact on the decision-making process in business. Topics include rule-making, investigatory procedures, enforcement, adjudication, due process, judicial review, and disclosure of information. Methods and practices businesses may use to successfully deal with proposed and current regulatory rules and decisions are emphasized. (fall)

MGMT 4450 International Business Law (3 credits)—*Prerequisite(s): MGMT 3310*. An examination of the legal aspects involved in developing and conducting international business transactions. The course emphasizes private law and its impact on the managerial decision-making process. Topics include the international aspects of commercial trade, governmental regulation, and dispute settlement.

MGMT 4460 Leadership Studies (3 credits)—The study of leadership from an historical and contemporary perspective. Students will identify, apply, and reflect on aspects of leadership development, including concepts of personal change toward effective leadership in a changing environment. Topics cover personal assessment and development, values and ethics, power and influence, followership, group dynamics, controversy with civility, and citizenship. (fall)

MGMT 4510 Human Resources Management (3 credits)—*Prerequisite(s): MGMT 3000*. A survey of the principles and policies concerning the personnel function of a business, its structure, job analysis, forecasting, recruiting, selecting, training, and evaluation. Special emphasis will be given to affirmative action programs, equal employment opportunity directives, legal decisions, and the practice of industrial relations in the field of American business enterprise today. (fall, spring, summer)

MGMT 4520 Human Resource Management in Team-Based Organizations (3 credits)—*Prerequisite(s): MGMT 4510 or permission of instructor.* This course prepares students to deal with the unique issues that arise in managing human resources in a team-based organization. The focus of the course is on self-managing work teams. Topics include recruiting and selecting team members, cross-training, skill-based pay and gainsharing compensation systems, and team performance appraisal.

MGMT 4530 Compensation Management (3 credits)—*Prerequisite(s): MGMT 4510.* An in-depth look at the role of the company, government, union, and employee in the design and administration of a compensation system and a survey of the problems faced by modern managers of such a system. (fall, spring)

MGMT 4540 Personnel Research and Measurement (3 credits)—*Prerequisite(s): ECON 2080 and MGMT 4510.* A review and evaluation of appropriate studies in order to become familiar with personnel measurement techniques such as job evaluation, performance appraisal systems, morale surveys, and personnel auditing procedures. (fall)

MGMT 4547/5547 Corporate Etiquette (3 credits)—Designed to help students present themselves with confidence to outclass the competition. Topics covered include introductions, conversation skills, working a room, business attire, dining in corporate America, wine selection, resume writing, interviewing, international business and more. Skills should help you obtain a job, advance to a higher position, and make career changes. (fall, spring, summer)

MGMT 4560 Planning and Staffing (3 credits)—*Prerequisite(s): MGMT 3000*. An in-depth review of the concepts and techniques of planning and staffing used by organizations to ensure adequate recruitment and selection of skilled employees. Topics to be covered include staffing models, economic and labor market conditions, the impact of units in hiring, legal factors in recruiting and selection, strategic planning, job analysis, forecasting labor supply and demand, measurement issues, external and internal recruitment and selection, and staffing system management. (fall)

MGMT 4570 Training and Development (3 credits)—*Prerequisite(s): MGMT 4510 or permission of instructor.* An introduction to the concepts and techniques of training and development. The organization of the sources and methods used to determine training and development needs, to implement programs, and to evaluate the success of these programs. (spring)

MGMT 4587/5587 HRM Certification (3 credits)—*Prerequisite(s): MGMT 4510 or the permission of instructor.* A review of the content domain of human resource management topics as defined by the Society for Human Resource Management. Students will prepare for the Society of Human Resource Management's Human Resource Certification Institution Examination. Major content areas include professionalism and ethics, management practices, selection and placement, training and development, compensation and benefits, employee and labor relations, and health, safety and security. Practice exams are a major focus. (spring)

MGMT 4600 Employment Law for Managers (3 credits)—*Prerequisite(s): MGMT 3000 and MGMT 3310*. A review of the legal implications of federal employment legislation and regulation of human resources in organizations. Special emphasis is placed on the impact of federal legislation on recruiting, testing, selection, evaluation, discipline, and the termination of employees.

MGMT 4617/5617 Small Business Management (3 credits)—*Prerequisite(s): MGMT 3000 or equivalent*. A study of the opportunities, pitfalls, and problems in the creation and management of small business operations. Case studies are used to illustrate the application of principles. (summer)

MGMT 4657/5657 Strategic Environmental Management in Business (3 credits)—*Prerequisite(s): MGMT 3000 or permission of instructor*. This course prepares managers in business organizations to make successful business decisions which are compatible with a sustainable ecosystem. It provides the knowledge, values, and frameworks necessary to implement sustainable growth strategies in business organizations. (spring)

MGMT 4667/5667 Environmental Law for Business (3 credits)—*Prerequisite(s): MGMT 3000, or MGMT 5020, or equivalent.* The course is designed to provide students with an understanding of the environmental laws and regulations that influence decision-making in the current business climate. Topics include the process by which environmental legislation is developed and promulgated, how regulations are revised, and the basic scientific and policy foundations driving specific environmental legislation. Also covered is the interaction of the judicial process in the enforcement of environmental legislation. The student also will be introduced to the technical aspects of environmental legislation most affecting business operations and the manager's role regarding compliance issues.

MGMT 4900 Independent Study in Management (1-3 credits)—A course designed for advanced students who, under the direction of a management faculty member, wish to engage in independent research or an intensive study of subjects not covered in other available courses. Prior departmental and college approval is needed. (spring)

MGMT 4905 Management Internship (3 credits)—*Prerequisite(s): Completion of, at least, six credit hours at the upper-division level in the student's major, junior or senior standing and a 2.7 GPA or above.* Students are selected through a competitive process for assignments in approved business or public-sector organizations as interns under the supervision of the internship coordinator and field placement supervisors. Students may not earn more than three semester credits for this course which can be used as a free elective or an elective within a business major, with prior approval by the chair. (spring, summer)

MGMT 4910 Policy and Strategy Formulation (3 credits)—*Prerequisite(s): Declared business major, and last-semester senior standing. Seniors must successfully complete the Senior Business Exam (SBE) prior to registering for the capstone course MGMT 4910 Policy and Strategy. The SBE is administered in October and March.* Specific problems involved in the formulation of consistent business policies and the maintenance of efficient organizations. (fall, spring, summer)

MGMT 4957/5957 Topics in Management (1-6 credits)—*Prerequisite(s): Senior or graduate standing and permission of instructor.* This course gives students an opportunity to study special problems and new developments in the field of management. (fall, spring, summer)

Marketing

MKTG

Note: All students enrolling in upper-division 3000 - 4000 level College of Business and Technology courses must have junior or senior standing.

MKTG 2220 Perspectives on Dress, Culture, & Society (3 credits)—An exploration of clothing in relation to the individual, the family, and society. The social psychology of clothing and essential factors in consumer clothing decisions will be emphasized. (fall)

MKTG 3200 Principles of Marketing (3 credits)—*Prerequisite(s): Junior standing.* An introductory course designed to develop in students an understanding of basic marketing concepts and functions in market-oriented institutions. Marketing strategy is studied with appreciation for the constraints imposed by consumer behavior, marketing institutions, competition, and the law. (fall, spring, summer)

MKTG 3202 Consumer Behavior (3 credits)—*Prerequisite(s): MKTG 3200.* Study of the nature and dynamics of consumer markets. Emphasis is placed on the concepts and techniques used to identify and measure target areas relative to differing behavioral patterns for use in marketing strategy. (fall, spring, summer)

MKTG 3225 Apparel Product Analysis (3 credits)—*Prerequisite(s): MKTG 3215 or permission of the instructor.* Analysis of quality and selection of consumer products for specific end uses, and an examination of pricing strategies used by merchandisers of apparel products. In-class laboratory activities included.

MKTG 3210 Fundamentals of Distribution (3 credits)—*Prerequisite(s): ECON 2210 and MKTG 3200.* This course reviews channels of marketing distribution and introduces component areas of distribution such as transportation, inventory control, warehousing, and material handling. (fall, spring, summer)

MKTG 3215 Consumer Textiles (3 credits)—An analysis of textile products from fiber to finished fabric and an examination of new developments in legislation, textile and apparel economics, and current issues in the textile industry.

MKTG 3230 Fashion Fundamentals (3 credits)—*Prerequisite(s): MKTG 2220.* An overview of the fashion business. The influence of historic costume on modern dress, fashion terminology, design processes, techniques of analysis and prediction, and fundamentals of apparel manufacturing will be explored. (fall)

MKTG 3250 Marketing Communications (3 credits)—*Prerequisite(s): MKTG 3200.* A study of the role and influence of persuasive communications in demand stimulation and expansion. Behavioral theory underlying promotional techniques is emphasized and applications to mass communications, personal selling, and sales promotion are utilized. (fall)

MKTG 3310 Business Logistics (3 credits)—*Prerequisite(s): ECON 2210 and MKTG 3200.* Business logistics comprise the largest component of physical distribution costs. This course surveys the economic principles and institutional arrangements underlying managerial decisions on choice of transportation modes, carriers, and strategies. (fall, summer)

MKTG 3350 Retailing (3 credits)—*Prerequisite(s): MKTG 3200.* A comprehensive course dealing with the role of retailing in the marketing environment. Location, buying, promotion, organization, personnel, and control in a retail enterprise are examined. (fall, spring)

MKTG 3740 Sales Force Management (3 credits)—*Prerequisite(s): MKTG 3200.* Building upon a foundation of basic principles of salesmanship and persuasion, emphasis is placed upon the problems confronting sales executives, and the techniques, policies, and strategies used in their solution. (fall, spring, summer)

***MKTG 3750 Advertising Campaign Management (3 credits)**—*Prerequisite(s): MKTG 3200 and MKTG 3202, or permission of instructor.* Stresses the managerial aspects of advertising practice: setting objectives, creative and media strategies, budgeting, measuring effectiveness, and dealing with agencies. Controversial issues dealing with social and economic aspects of advertising and regulation of advertising are discussed. (fall, spring, summer)

**NOTE: Students cannot receive credit for both ADVR 3750 and MKTG 3750. *Cross-listed with ADVR 3750*

MKTG 4018 Senior Honors Seminar (1-6 credits)—*Prerequisite(s): ECON 3088 and admission to the College of Business and Technology Honors Program.* A seminar for College of Business and Technology honors students who are working on senior honors theses or other approved projects. Upon successful completion of the course, students will have demonstrated the ability to complete the research process by creating a written product suitable for submission to the College of Business and Technology faculty. (fall, spring)

MKTG 4217/5217 Health Care Marketing (3 credits)—*Prerequisite(s): MKTG 3200 or permission of instructor.* This course is intended to give students a basic theoretical and practical knowledge of marketing as applied to the health care industry. Emphasis will be placed on the emergence of marketing's importance in the health care industry, developing marketing information systems, and making marketing decisions in a health care context. (fall, spring)

MKTG 4220 Fashion Merchandising (3 credits)—*Prerequisite(s): MKTG 3230.* The study of merchandising procedures as they are applied to the marketing of apparel. Merchandising practice will be studied as a segment of the total apparel marketing system. (spring)

MKTG 4221 Apparel Merchandising Study Tour (1-3)—*Prerequisite(s): Junior standing and permission of instructor.* The Apparel Merchandising Study Tour will acquaint students with major apparel market centers, providing exposure to design, manufacturing, and retail organizations of historic importance or current prominence. Interaction with professionals will be provided with a lecture series and a trip to selected United States or European market centers. (summer)

MKTG 4240 Visual Merchandising (3 credits)—*Prerequisite(s): MKTG 2220 and MKTG 4220; or departmental approval.* An overview of the visual design process as it is applied to the merchandising of apparel and home furnishing products. Emphasis centers on the development of skills needed to plan, implement, and evaluate effective merchandise presentations in varied retail settings. (spring)

MKTG 4250 Advertising and Promotion (3 credits)—*Prerequisite(s): MKTG 4220.* A study of the purposes and applications of advertising and promotion in the fashion industry, including procedures, methods, and techniques used in the organization, execution, and evaluation of various promotional activities. (fall)

MKTG 4255 Merchandise Planning and Buying (3 credits)—*Prerequisite(s):MKTG 4220 and ECON 2220 or permission of the instructor.* An examination of the purchase of apparel merchandise for resale to the ultimate consumer; the numerical terminology, concepts, and calculators for retail management; and the role of the retail buyer.

MKTG 4617/5617 Marketing Research (3 credits)—*Prerequisite(s): MKTG 3200 and ECON 2080.* or equivalent. A study and application of the research process and techniques used in marketing research. Project planning and design, data collection and analysis, and the preparation of research reports are emphasized through lecture and student projects. (fall, spring, summer)

MKTG 4710 International Marketing (3 credits)—*Prerequisite(s): MKTG 3200 and MKTG 3202.* Social, cultural, political, and economic variables are considered in studying marketing operations in foreign environments. Special attention is given to adaptation of the marketing mix and entry strategies. (spring)

MKTG 4900 Independent Study in Marketing (1-3 credits)—A course designed for advanced students who, under the direction of a marketing faculty member, wish to engage in independent research or an intensive study of subjects not covered in other available courses. Prior departmental and college approval is needed.

MKTG 4905 Marketing Internship (3 credits)—*Prerequisite(s): Completion of, at least, six credit hours at the upper-division level in the student's major, junior or senior standing, and a 2.7 GPA or above.* Students are selected through a competitive process for assignments in approved business or public-sector organizations as interns under the supervision of the internship coordinator and field placement supervisors. Students may not earn more than three semester credits for this course which can be used as a free elective or an elective within a business major with prior approval by the chair. (spring, summer)

MKTG 4910 Marketing Management (3 credits)—*Prerequisite(s): Declared Business major and senior standing.* The capstone course in marketing emphasizes an analytical approach to solving representative marketing problems. The student will develop an appreciation of the complexity of modern marketing and facility in analytical thought. (fall, spring, summer)

Military Science
MSCI

MSCI 1180 Leadership/Personal Development (Lab) (1 credit)—Practical application of leadership skills and an introduction to military drills and ceremonies. Uniforms will be issued to participants. (repeatable for credit one time)(fall)

MSCI 1181 Tactical Leadership (Lab) (1 credit)—Practical application of leadership skills and an introduction to military drills and ceremonies. Uniforms will be issued to participants. Individuals who sign up for MSCI 1181 must also enroll in MSCI 2110. (repeatable for credit one time)(spring)

MSCI 1182 Military Practicum III (1 credit)—Practical application of leadership skills and an introduction to military drills and ceremonies. Uniforms will be issued to participants. Individuals who sign up for MSCI 1182 must also enroll in MSCI 2150.

MSCI 1210 Leadership/Personal Development (3 credits)—Introduces students to the personal challenges and competencies critical for effective leadership. Students learn how the personal development of life skills such as critical thinking, goal setting, time management, physical fitness, and stress management relate to civilian and military leadership professions. Students will utilize the Basler Challenge Course and receive basic marksmanship training. (fall)

MSCI 1217 Physical Fitness (Basic) (1 credit)—Designed to promote overall fitness with an emphasis on nutrition, endurance, and strength training as part of an overall lifestyle. This course may be repeated up to four (4) times for credit. (fall, spring)

MSCI 1220 Introduction to Tactical Leadership (3 credits)—*Prerequisite(s): Completion of MSCI 1210 or approval of Professor of Military Science.* A study of leadership fundamentals such as setting direction, problem-solving, listening, presenting briefs, providing feedback, and using effective writing skills that relate to civilian and military leadership professions. Students will utilize the Basler Challenge Course and receive basic marksmanship training. (spring)

MSCI 2110 Innovative Team Leadership (3 credits)—Explores the dimensions of creative and innovative tactical leadership strategies and styles by examining team dynamics and two historical leadership theories that form the basis of civilian and military leadership traits and behavior theories. Students practice aspects of personal motivation and team building in the context of planning, executing, and assessing team exercises and participating in leadership labs. Case studies provide tangible context for learning the Soldier's Creed and Warrior Ethos as they apply in changing operating environments. (fall)

MSCI 2140 Special Problems (3 credits) — *Prerequisite: Approval of Professor of Military Science.* Course is designed for students with individual development needs as determined by faculty. (fall, spring)

MSCI 2150 Military Skills I (2 credits)—Examines the challenges of leading tactical teams in complex and changing operating environments. Course highlights the dimensions of terrain analysis, patrolling, and operation orders. Further study of the theoretical basis of the leadership framework explores the dynamics of adaptive leadership in the context of military operations. Students develop greater self-awareness as they assess their own leadership styles and practice communication and team building skills. (spring)

MSCI 2580 Leadership Training Course (variable from 1-6 credits)—*Prerequisite(s): Approval of Professor of Military Science.* This option is available only for students who did not qualify for the Advanced Phase by completing four Basic Phase courses during their freshman and sophomore years. The Basic Camp, conducted at Fort Knox, Kentucky, is a five (5) week leadership development course where students are placed in an intensive training environment where they live, work, and learn in a cooperative group under 24-hour-a-day leadership instruction and receive detailed appraisal of their displayed leadership performance. (summer)

MSCI 3110 Adaptive Tactical Leadership (3 credits)—*Prerequisite(s): Completion of the Basic Course or equivalent or approval of Professor of Military Science.* Course continues to challenge students to study, practice, and evaluate adaptive leadership skills as they are presented with challenging scenarios related to squad tactical operations. Students receive systematic and specific feedback on their leadership attributes and actions. Based on such feedback, as well as their own self-evaluations, students continue to develop their leadership and critical thinking abilities. (fall)

MSCI 3120 Leadership in a Changing Environment (3 credits)—*Prerequisite(s): Completion of MSCI 3110 or approval of Professor of Military Science.* Course utilizes increasingly intense situational leadership challenges to build awareness and skills in leading tactical operations up to platoon level. Students will review aspects of combat, stability, and support operations; conduct military briefings to develop proficiency in giving operation orders; focus on exploring, evaluation, and developing skills in decision-making, persuading, and motivating team members in changing operating environments. (spring)

MSCI 3217 Physical Fitness (Instructor) (1 credit)—Designed to prepare the MS III and IV contracted Cadets to conduct and evaluate military physical fitness training. Course is required for contracted Cadets. This course may be repeated up to three (3) times for credit. (fall, spring)

MSCI 4110 Developing Adaptive Leaders (3 credits)—*Prerequisite(s): Completion of MSCI 3120 or approval of Professor of Military Scienc*e. Course develops student proficiency in planning, executing, and assessing complex operations, functioning as a member of a staff, and providing performance feedback to subordinates as part of civilian and military leadership professions. Students assess risk, make ethical decisions, identify responsibilities of key staff, coordinate staff roles, and use situational opportunities to teach, train, and develop subordinates. (fall)

MSCI 4120 Leadership in a Complex World (3 credits)—*Prerequisite(s): Completion of MSCI 4110 or approval of Professor of Military Science.* Course explores the dynamics of leading in the complex situations of current military operations in changing operating environments. Students examine differences in customs and courtesies, military law, principles of

war, and rules of engagement in the face of international terrorism. Course also explores aspects of interacting with non-government organizations, civilians on the battlefield, and host nation support. (spring)

MSCI 4140 Special Problems (3 credits) — *Prerequisite: Approval of Professor of Military Science*. Course is designed for students with individual development needs as determined by faculty. (fall, spring)

MSCI 4580 Leadership Development and Assessment (6 credits)—*Prerequisite(s): Completion of MSCI 3110 and MSCI 3120*. The Advanced Camp is a five (5) week leadership course conducted at Fort Lewis, Washington. Students will rotate through leadership positions, supervising their peers through both academic and tactical activities in both garrison and field environments. Students will be under leadership evaluation 24 hours a day for the duration of the course, will receive a detailed appraisal of their displayed leadership performance, and return to campus qualified to enter the 4000 level Military Science and Leadership courses. (summer)

MSCI 4581 Developing Adaptive Leaders (Lab) (1 credit) — Required for contracted Cadets. Practical application of leadership skills as presented in MSCI 4110. Uniforms will be issued to participants.

MSCI 4582 Military History (3 credits) — A historical perspective to decisions made by American military leaders from the colonial period through the current operating environment. Will explore the military's role in society, the evolution of war and the progression of military professionalism, the major wars fought by the United States Army, and the role of the United States military in joint operations and humanitarian operations. (fall, spring)

Music
MUSC

MUSC 1000 Orientation to the Music Program (1 credit)—A freshman success course focusing on the requirements for music majors, including curriculum, recital attendance, juries, and piano proficiency. Introduction to university systems and programs, including e-mail, counseling services, library, etc.

MUSC 1010 Class Piano I (1 credit)—*Prerequisite(s): Admission by consent of instructor*. Class piano provides the non-keyboard music major with functional keyboard skills, such as the ability to sight-read, score-read, harmonize, transpose, and improvise.

MUSC 1020 Class Piano II (1 credit)—*Prerequisite(s): MUSC 1010*. A continuation of MUSC 1010.

MUSC 1030 Introduction to Music (3 credits)—An introduction to the development of music, with an emphasis on art music of the Western hemisphere. Topics include elements of music, instruments and ensembles, form, styles and periods, including major composers and works. Synthesis is encouraged through listening to and writing about music. Concert attendance outside class is required.

MUSC 1035 History of Jazz (3 credits)—A study of the origins, developments, and current trends in the jazz idiom. Course focuses on important musicians, styles, and bands that have shaped the development of jazz.

MUSC 1040 Class Voice (1 credit)—Group instruction in the fundamental processes of good singing, i.e., breathing, tone production, diction, etc.

MUSC 1202 Symphonic Wind Ensemble (1 credit)—Concert organization which prepares and performs representative traditional and contemporary works for the wind medium. Open to all students by audition.

MUSC 1203 Concert Band (1 credit)—Concert organization which performs music of all forms, from classic to popular. Open to all students by consultation with instructor.

MUSC 1204 Orchestra (1 credit)—Study and performance of orchestral literature. Admission by consent of instructor. Credit given for performance with the Johnson City Symphony Orchestra.

MUSC 1206 Chamber Orchestra (1 credit)—An ensemble for the performance of Chamber Orchestra Literature. Admission by the consent of the instructor.

MUSC 1211 Brass Choir (1 credit)—Study and performance of brass chamber music. Admission by consent of instructor.

MUSC 1212 Woodwind Ensemble (1 credit)—Study and performance of standard chamber music literature suitable for the ability and instrumentation of the ensemble.

MUSC 1213 String Ensemble (1 credit)—Study and performance of string literature. Admission by consent of instructor.

MUSC 1214 Percussion Ensemble (1 credit)—Study and performance of percussion literature. Admission by consent of instructor.

MUSC 1215 Collegium Musicum (1 credit)—Study and performance of music of the 13th - 18th centuries on instruments appropriate to the period. Admission by permission of the instructor.

MUSC 1217 Opera Workshop (1 credit)—A practical laboratory approach to the study and presentation of opera. Open to any person interested in singing, coaching, directing, orchestral playing, costuming, set construction, lighting, publicizing, and producing for the public. Admission by consent of the instructor.

MUSC 1220 Musical Theatre Practicum (1 credit)—Open to any person interested in singing, dancing, acting, orchestral playing, costuming, coaching, set construction, and other aspects of the theatre. Admission by consent of the instructor.

MUSC 1221 Choir (1 credit)—Study and performance of accompanied and unaccompanied choral music of all periods. Open to all students by consultation with director of choral activities.

MUSC 1241 Jazz Singers (1 credit)—Study and performance of popular styles. Open to all students by consultation with director of choral activities.

MUSC 1251 Chorale (2 credits)—Small vocal groups created for performance of various types of ensemble music. Admission by consent of the instructor.

MUSC 1261 Jazz Ensemble (1 credit)—Study devoted to jazz and pop styles. Attention given to improvisation and understanding stylistic problems. Open to all students by consultation with instructor.

MUSC 1262 Jazz Combo (1 credit)—The study of small jazz combo performance. Permission of instructor.

MUSC 1271 Instrumental Chamber Groups (1 credit)—Study and performance of music for small instrumental ensembles. Admission by consent of the instructors.

MUSC 1272 Accompanying (1 credit)—Designed to provide ensemble experience for keyboard majors. Students will be assigned to accompany singers or instrumentalists under the supervision of applied music instructors. The accompanists will attend lessons, rehearse outside of lesson times, play for juries, and other performances as assigned.

MUSC 1275 Alexander Technique (2 credits)—A study of the Alexander Technique and its application to musicians in a small group setting.

MUSC 1400 Music Fundamentals (2 credits)—Elementary music theory and practice in aural skills for the nonmusic major and music major with limited or no theory background.

MUSC 1410 Theory I (2 credits)—Basic study of scales, keys, intervals, and diatonic harmony. Study of basic musical forms Analysis of Baroque and Classical compositions. Admission by consent of instructor.

MUSC 1411 Aural Skills I (1 credit)—Sight-singing, melodic, harmonic, and rhythmic dictation. (Laboratory for MUSC 1410.)

MUSC 1420 Theory II (2 credits)—*Prerequisite(s): MUSC 1410*. A continuation of MUSC 1410.

MUSC 1421 Aural Skills II (1 credit)—*Prerequisite(s): MUSC 1411*. A continuation of MUSC 1411.

MUSC 1801 Applied Piano Level I (1-2 credits)

MUSC 1811 Applied Winds Level I (1-2 credits)

MUSC 1821 Applied Strings Level I (1-2 credits)

MUSC 1841 Applied Voice Level I (1-2 credits)

MUSC 1851 Applied Percussion Level I (1-2 credits)

MUSC 2010 Class Piano III (1 credit)—*Prerequisite(s): MUSC 1020.* A continuation of MUSC 1020.

MUSC 2020 Class Piano IV (1 credit)—*Prerequisite(s): MUSC 2010.* A continuation of MUSC 2010.

MUSC 2410 Theory III (2 credits)—*Prerequisite(s): MUSC 1420.* A continuation of Theory I and II. Chromatic harmony and contemporary techniques. Analysis of Romantic and Modern compositions.

MUSC 2411 Aural Skills III (1 credit)—*Prerequisite(s): MUSC 1421.* A continuation of Aural Skills I and II.

MUSC 2420 Theory IV (2 credits)—*Prerequisite(s): MUSC 2410.* A continuation of MUSC 2410.

MUSC 2421 Aural Skills IV (1 credit)—*Prerequisite(s): MUSC 2411.* A continuation of MUSC 2411.

MUSC 2540 Music History Survey I (3 credits)—Music from antiquity through 1600.

MUSC 2550 Music History Survey II (3 credits)—*Prerequisite(s): MUSC 2540.* Music from 1600 through 1760.

MUSC 2560 Jazz Theory and Improvisation (2 credits)—*Prerequisite(s):* MUSC 1420. The study of jazz theory and jazz improvisation. Permission of Instructor.

MUSC 2600 String Methods (2 credits)—A survey of string instruments and equipment. Includes playing fundamentals, materials, and teaching techniques.

MUSC 2620 Instrumental Survey (2 credits)—*Prerequisite(s): Vocal and keyboard/vocal music education majors only.* A survey of playing and teaching techniques for band and orchestral instruments.

MUSC 2630 Woodwind Methods I (2 credits)—Development of performance skill and teaching knowledge of the clarinet and flute.

MUSC 2631 Woodwind Methods II (1 credit)—*Prerequisite(s): MUSC 2630.* Development of performance skill and teaching knowledge of the oboe and bassoon.

MUSC 2660 Brass Methods (3 credits)—Study of the brass instrument family with special emphasis on teaching materials and pedagogical aspects. Instruments included are trumpet, horn, trombone, euphonium, and tuba.

MUSC 2690 Percussion Methods (3 credits)—A survey of percussion instruments and equipment designed for music education majors. Includes playing fundamentals, materials, and teaching techniques.

MUSC 2710 Diction for Singers I (1 credit)—The study of Italian and German diction to develop correct pronunciation and authentic accent for singing.

MUSC 2720 Diction for Singers II (1 credit)—The study of French diction to develop correct pronunciation and authentic accent for singing.

MUSC 2901 Applied Piano Level II (1-2 credits)

MUSC 2911 Applied Winds Level II (1-2 credits)

MUSC 2921 Applied Strings Level II (1-2 credits)

MUSC 2941 Applied Voice Level II (1-2 credits)

MUSC 2951 Applied Percussion Level II (1-2 credits)

MUSC 2989 Internship/Cooperative Education (1-3 credits)

MUSC 3202 Symphonic Wind Ensemble (1 credit)—*Prerequisite(s): Two semesters of MUSC 1202 and upper-division standing.* Open to all students by consultation with instructor. Concert organization which prepares and performs representative traditional and contemporary works for the wind medium. May be repeated for credit.

MUSC 3203 Concert Band (1 credit)—*Prerequisite(s): Two semesters of MUSC 1203 and upper-division standing.* Open to all students by consultation with instructor. Concert organization which prepares and performs music of all forms, from classic to popular. May be repeated for credit.

MUSC 3204 Orchestra (1 credit)—*Prerequisite(s): Two semesters of MUSC 1204 and upper-division standing.* Admission by permission of instructor. Study and performance of orchestral literature. May be repeated for credit.

MUSC 3206 Chamber Orchestra (1 credit)—*Prerequisite(s): Two semesters of MUSC 1206 and upper-division standing.* Admission by consent of instructor. An ensemble for the performance of chamber orchestra literature. May be repeated for credit.

MUSC 3211 Brass Choir (1 credit)—*Prerequisite(s): Two semesters of MUSC 1211 and upper-division standing.* Admission by consent of instructor. Study and performance of brass chamber music. May be repeated for credit.

MUSC 3212 Woodwind Ensemble (1 credit)—*Prerequisite(s): Two semesters of MUSC 1212 and upper-division standing.* Study and performance of standard chamber music literature suitable for the ability and instrumentation of the ensemble. May be repeated for credit.

MUSC 3213 String Ensemble (1 credit)—*Prerequisite(s): Two semesters of MUSC 1213 and upper-division standing.* Admission by consent of instructor. Study and performance of string literature. May be repeated for credit.

MUSC 3214 Percussion Ensemble (1 credit)—*Prerequisite(s): Two semesters of MUSC 1214 and upper-division standing.* Admission by consent of instructor. Study and performance of percussion literature. May be repeated for credit.

MUSC 3215 Collegium Musicum (1 credit)—*Prerequisite(s): Two semesters of MUSC 1215 and upper-division standing.* Admission by consent of instructor. Study and performance of music in the 13th - 18th centuries on instruments appropriate to the period. May be repeated for credit.

MUSC 3217 Opera Workshop (1 credit)—*Prerequisite(s): Two semesters of MUSC 1217 and upper-division standing.* Open to any person interested in singing, coaching, directing, orchestral playing, costuming, set construction, lighting, publicizing, and producing for the public. A practical laboratory approach to the study and presentation of opera. May be repeated for credit.

MUSC 3220 Musical Theatre Practicum (1 credit)—*Prerequisite(s): Two semesters of MUSC 1220 and upper-division standing.* Admission by consent of instructor. Open to any person interested in singing, dancing, acting, orchestral playing, costuming, coaching, set construction, and other aspects of theatre. May be repeated for credit.

MUSC 3221 Choir (1 Credit)—*Prerequisite(s): Two semesters of MUSC 1221 and upper-division standing.* Open to all students by consultation with director of choral activities. Study and performance of accompanied and unaccompanied choral music of all periods. May be repeated for credit.

MUSC 3241 Jazz Singers (1 credit)—*Prerequisite(s): Two semesters of MUSC 1241 and upper-division standing.* Open to all students by consultation with director of choral activities. Study and performance of popular styles. May be repeated for credit.

MUSC 3251 Chorale (2 credits)—*Prerequisite(s): Two semesters of MUSC 1251 and upper-division standing.* Admission by consent of instructor. Small vocal groups created for performance of various types of ensemble music. May be repeated for credit.

MUSC 3261 Jazz Ensemble (1 credit)—*Prerequisite(s): Two semesters of MUSC 1261 and upper-division standing.* Open to all students by consultation with instructor. Study devoted to jazz and pop styles. Attention given to improvisation and understanding of stylistic problems.

MUSC 3262 Advanced Jazz Combo (1 credit)—Advanced study of small jazz combo performance. Permission of instructor. Two semesters of MUSC 1262 and upper-division standing.

MUSC 3271 Instrumental Chamber Group (1 credit)—*Prerequisite(s): Two semesters of MUSC 1271 and upper-division standing.* Admission by consent of instructor. Study and performance of music for small instrumental ensembles. May be repeated for credit.

MUSC 3272 Accompanying (1 credit)—*Prerequisite(s): two semesters of MUSC 1271 and upper-division standing.* Designed to provide ensemble experience for keyboard majors. Students will be assigned to accompany singers or instrumentalists under the supervision of applied music instructors. The accompanists will attend lessons, rehearse outside of lesson times, and play for juries and other performances as assigned. May be repeated for credit.

MUSC 3310 Music Skills and Concepts (2 credits)—The development of skills necessary for the teaching of music in the elementary classroom, including music reading, playing, and appreciation.

MUSC 3420 Modal Counterpoint (2 credits)—*Prerequisite(s): MUSC 2420 and MUSC 2421.* The study and writing of modal counterpoint style from two voices through major forms.

MUSC 3430 Tonal Counterpoint (2 credits)—*Prerequisite(s): MUSC 2420 and MUSC 2421.* The study and writing of tonal counterpoint style from two-part compositions through major forms.

MUSC 3540 Music History Survey III (3 credits)—*Prerequisite(s): MUSC 2420 and 2550.* Music from 1760 through circa 1890.

MUSC 3550 Music History Survey IV (3 credits)—*Prerequisite(s): MUSC 3540.* Music from 1890 to the present.

MUSC 3570 Introduction to Conducting (2 credits)—*Prerequisite(s): MUSC 2420 and 2421.* An introduction to the skills used by conductors of choral and instrumental ensembles.

MUSC 3580 Choral Conducting (2 credits)—*Prerequisite(s): MUSC 3570.* Study of choral conducting techniques with practical application in a rehearsal environment.

MUSC 3590 Instrumental Conducting (2 credits)—*Prerequisite(s): MUSC 3570.* The controlling and expressive gestures of the conductor of the instrumental ensemble. Interpretation, score study, balance, and conducting styles will be discussed as pertinent to specific repertoire from fundamental technique to advanced practice.

MUSC 3739 Piano Literature I (1 credit)

MUSC 3740 Piano Literature II (1 credit)

MUSC 3741 Piano Literature III (1 credit)

MUSC 3901 Applied Piano Level III (1-2 credits)

MUSC 3911 Applied Winds Level III (1-2 credits)

MUSC 3921 Applied Strings Level III (1-2 credits)

MUSC 3941 Applied Voice Level III (1-2 credits)

MUSC 3951 Applied Percussion Level III (1-2 credits)

MUSC 3989 Internship/Cooperative Education (1-3 credits)

MUSC 4018 Honors Thesis (3 - 6 credits)—Open to those in university honor programs only. A capstone experience serving as the culmination of an honors curriculum.

MUSC 4470 Composition (2 credits)—*Prerequisite(s): MUSC 2421.* Class participation and private conference. Original composition with projects based on student's degree of skill and advancement. May be repeated for credit.

MUSC 4510 The Teaching of Music in the Elementary School (3 credits)—The role of the music teacher in the presentation of music experiences in the elementary school (K - 6).

MUSC 4520 The Teaching of Music in the Secondary School (3 credits)—*Prerequisite(s): MUSC 4510.* A comprehensive analysis of the secondary choral program, including general music.

MUSC 4560 Jazz Pedagogy (2 credits)—A survey of pedagogical methods and materials for beginning jazz studies, including jazz theory and improvisation, jazz history and styles, jazz piano, program planning and administration, instrumental performance, rehearsal techniques, resources, and arranging.

MUSC 4570 Marching Band Methods (3 credits)—Survey of marching techniques and systems. Emphasis on the creative approach to the composition of the field band show. Charting techniques, formation analysis, and instrument placement will be practiced.

MUSC 4571 Marching Band Practicum (1 credit) – *Prerequisite(s): Music 4570.* This 30-hour practicum is a hands-on, laboratory experience working with an area high school band director and marching band. Students assist/teach in a rehearsal setting. Course provides opportunity to learn and experience leadership and administrative qualities and curriculum goals needed to successfully teach a high school marching band program. This course is for instrumental music education majors.

MUSC 4580 Organization and Administration of Instrumental Music (3 credits)—A detailed study of organization, budget, recruiting, and general administration of the instrumental music program in the schools.

MUSC 4600 Orchestration and Arranging (2 credits)—*Prerequisite(s): MUSC 2420 and MUSC 2421; piano proficiency.* A study of band and orchestra instruments with exercise in scoring for small and large ensembles.

MUSC 4601 Vocal Pedagogy (2 credits)—*Prerequisite(s): Two years of vocal study.* The study of the principles, techniques, and materials for developing effective singing, including anatomy of the vocal mechanism, problems of breath control, concept of tone, diction, and principles of song interpretation.

MUSC 4610 Vocal Arranging (2 credits)—*Prerequisite(s): MUSC 4600.* Experience in arranging music for various vocal groups, including choir, jazz band, and jazz singers.

MUSC 4617/5617 Teaching Beginning Piano (3 credits)—*Prerequisite(s): Level II—standing in piano or permission of instructor.* Examination of methods and materials used in beginning-level piano instruction of adults and children.

MUSC 4627/5627 Teaching Intermediate Piano (3 credits)—*Prerequisite(s): Level II—standing in piano or permission of instructor.* Examination, guided instruction, and performance of literature used in intermediate-level piano instruction.

MUSC 4637/5637 Piano Pedagogy Practicum (1 credit)—*Prerequisite(s): Level II—standing in piano or permission of instructor.* Supervised teaching experience with the beginning piano student. Students will plan, implement, and evaluate instruction. Meets one (1) clock hour per week.

MUSC 4720 Art Song Literature (2 credits)—A survey of solo vocal literature from the 17th century to the present, including French, German, British, and American repertoire.

MUSC 4730 Choral Literature (3 credits)—Survey of important choral works from Renaissance to the present.

MUSC 4740 Keyboard Literature and Pedagogy (3 credits)—A survey of the basic literature of the harpsichord and piano performance, analysis, and research. A study of pedagogical methods and materials.

MUSC 4750 Brass Literature (3 credits)—A survey of brass literature, performance, analysis, and research.

MUSC 4751 Brass Pedagogy (3 credits)—A survey of pedagogical methods and materials for brass instruments.

MUSC 4760 Woodwind Literature (3 credits)—A survey of woodwind literature, performance, analysis, and research.

MUSC 4761 Woodwind Pedagogy (3 credits) —A study of pedagogical methods and materials for woodwind instruments.

MUSC 4770 Percussion Literature (3 credits)—A survey of percussion literature, performance, analysis, and research.

MUSC 4771 Percussion Pedagogy (3 credits) —A study of pedagogical methods and materials for percussion.

MUSC 4780 String Literature and Pedagogy (3 credits)—A survey of string literature, performance, analysis, and research. A study of pedagogical methods and materials.

MUSC 4810 Introduction to Suzuki Philosophy (2 credits)—*Prerequisite(s): Permission of instructor.* This course is an exploration of the historical development of the Suzuki Method, the Suzuki philosophy as it pertains to how children learn, and Suzuki methodology.

MUSC 4820 Suzuki Pedagogy (2 credits)—*Prerequisite(s): Permission of the instructor.* This course develops performance skills and pedagogical understanding of the sequential Suzuki repertoire. Observations of Suzuki lessons and classes are included in the field work for this course.

MUSC 4840 Teaching Practicum I (1 credit)—*Prerequisite(s): MUSC 4820 or equivalent.* An introductory experience in teaching the Suzuki Method, operating in a controlled, supervised setting.

MUSC 4850 Teaching Practicum II (1 credit)—*Prerequisite(s): MUSC 4840 or the equivalent.* An advanced experience in Suzuki teaching. Involves teaching Suzuki students through the ETSU Suzuki Studies Program.

MUSC 4910 Independent Study (1-3 credits)—*Prerequisite(s): Contract must be on file prior to registration.* Contract available in Mathes Hall, Room 100. Individual research, under the direction of a member of the music faculty.

MUSC 4957 Special Topics in Music (1-6 credits)

MUSC 4989 Internship/Cooperative Education (1-3 credits)

Nutrition and Foods

NTFD

NTFD 2415 Art and Science of Food Preparation (3 credits)—Basic menu planning processes and food preparation techniques for all classifications of foods, with consideration given to the nutritional needs and culinary preferences of diverse populations.

NTFD 2420 Principles of Nutrition (3 credits)—Introduction of scientific nutrition principles with emphasis on nutritional requirements, dietary sources of nutrients, nutrient utilization, and the impact of nutrition on energy intake and weight control, fitness, disease prevention, the life cycle, food technology, food safety, and the environment. (fall, spring)

NTFD 3430 Community Nutrition (3 credits)—Current trends in nutrition programs on the local, state, and national levels. Methods used to assess nutritional needs of populations. Influence of socioeconomic, cultural, and psychological factors on food and nutrition behavior of groups within a community. (fall, spring)

NFTD 3440 Quantity Food Procurement and Production (4 credits)—*Prerequisite(s): NFTD 2415.* Application of menu writing and design, quantity food procurement, production planning, preparation, distribution, and evaluation in food service operations. Menu planning and analysis as the basis for control within the food service is emphasized, and sanitation and safety within the commercial food service operation are explored. This course has a three-hour lab which provides hands-on food service experiences for the students. (spring)

NTFD 3465 Human Nutrition and Metabolism (3 credits)—*Prerequisite(s): NTFD 2420.* A comprehensive study of digestion, absorption, excretion, and storage of nutrients in the adult human with emphasis on digestive and endocrine physiology. (spring)

NTFD 3485 Basic Skills in Dietetics Practice (2 credits)—Explores governance and the code of ethics for the profession of dietetics, incorporating application of the nutrition care process in clinical and preventive health care settings, and development of negotiation and advocacy skills for improved patient care

NTFD 4415 Food Systems Administration (3 credits)—*Prerequisite(s): NTFD 2415.* Study of commercial food service operations and food delivery systems. Includes trends in food service operations and delivery, management theory, menu development for diverse groups, and marketing of food and nutrition services.

NTFD 4425 Clinical Nutrition I (3 credits)—*Prerequisite(s): NTFD 3465 HSCI 2020/21.* Principles of clinical dietetics management, medical terminology, medical documentation, design, and implementation of nutrition care plans. Begin the application of principles of clinical nutrition to prevention and treatment of disease, drug-nutrient interaction, nutritional assessment, and nutritional support. (fall)

NTFD 4437 Clinical Nutrition II (3 credits)—*Prerequisite(s): NTFD 4425.* Assessment, diagnosis, intervention, monitoring and evaluation of the patient with complicated disease states. Nutritional risk screening and nutritional treatment options to meet varying disease states and stages, and the role of the registered dietitian and medical nutrition therapy are discussed.

NTFD 4447/5447 Nutritional Biochemistry (3 credits)—*Prerequisite(s): NTFD 3465; HSCI 2020/21.* A study of nutrition as the science that integrates life processes from the cellular level on through the multi-system operation of the total organism. The focus will be on current trends in normal biochemical and physiological human nutrition. (fall)

NTFD 4475 Managing Food Service Operations (3 credits)—*Prerequisites: NTFD 3440 and NTFD 4415.* Business theories, management principles, decision-making, and control of food service operations. Includes cost and quality analysis of food service delivery, financial management of food service operations, and personnel and staffing controls.

NTFD 4535 Field Studies (3-9 credits)—Supervised field studies in student's major area of interest. May be repeated for a total of 6 credits.

NTFD 4465 Experimental Food Science (3 credits)—*Prerequisite(s): NTFD 2415 CHEM 1120/21.* Experimental study of ingredient functions and factors affecting product quality; development of food products suitable for diverse clientele; interpretation, evaluation, and use of professional literature to inform research methods and product development.

Nursing

NRSE

NRSE 1010 Orientation to College Life and Nursing as a Major (1 credit)—This course is designed to help the beginning student learn about nursing as a career choice. Journaling and other learning activities will help the student develop skills which lead to positive experiences and success at the university. Elective

NRSE 1015 Survey of Health Care Professionals (2 credits)—This course is an overview of the health care team. Interdisciplinary guest speakers and/or health care facility tours included. Students will have the opportunity to interact directly with a variety of health care professionals. Basic background information of interest to all health-related majors or those considering a major in health disciplines is provided. Elective

NRSE 2016 Pathophysiology (4 credits)— This course examines the pathophysiology of disease processes throughout the life span that cause alterations at the molecular, cellular, tissue, and organ levels. (fall, spring, summer)

NRSE 2020 Introduction to Professional Nursing (3 credits)—*Prerequisite(s): Admission to the nursing major or permission of the department chair; Corequisite(s): NRSE 2310.* This course is designed to introduce the characteristics of the nursing profession, health care delivery systems, nursing history, process and roles, and to introduce theory, practice, and research concepts. The nursing process and principles that guide practice are explicated. (fall, spring)

NRSE 2030 Health Assessment (4 credits)—*Prerequisite: Admission to the major or permission of the department chair and NRSE 2310.* The health assessment course focuses on the acquisition of strong history-taking and physical examination skills primarily in a laboratory setting, with select community experiences. Special emphasis will be placed on the transcultural considerations involved in health assessment and the physical examination of varied adult populations, as well as select family groups. (fall, spring, summer)

NRSE 2310 Communication for Health Professionals (2 credits)—*Prerequisite: Admission to nursing major.* This course is designed to introduce health professions students to the characteristics of effective communication and to develop basic competencies in communication with clients and colleagues in multi-disciplinary settings. (fall, spring)

NRSE 3005 Dosage Calculations (1 credit) —This course focuses on the necessary steps involved in solving clinically oriented calculations. A basic math review includes number systems, conversion of systems, fractions, decimals, ratio and proportion, and percentage. Methods of dosage calculation are included as a prerequisite to solving practical

calculation problems for oral, injectable, and intravenous medications. (fall, spring)

NRSE 3010 Pharmacology for Nursing (3 credits)—*Prerequisite(s): NRSE 2016 or permission of Department Chair*. This course focuses on concepts required by nurses to make sound decisions about the administration of pharmacotherapeutic agents. The nursing process is used to discuss pharmacotherapeutic agents in relation to disease prevention and health promotion, health protection, and maintenance. (fall, spring, summer)

NRSE 3028 Health Assessment for Public Health Nurses (3 credits)—*Prerequisite(s): Current active licensure as a registered nurse in Tennessee.* A health assessment course designed for public health nurses with emphasis on the acquisition of history-taking skills and physical examination techniques in the laboratory setting. Students will learn skills primarily related to pediatric and young and middle-aged adult clients. (summer)

NRSE 3030 Foundations of Nursing Practice (3 credits) – *Prerequisite: Completion of second semester, sophomore courses; Corequisite: NRSE 3010*. This course introduces the foundations for nursing care of clients' human needs. Emphasis is placed on independent and interdependent nursing interventions that aid adult clients and families in meeting their needs related to hygiene, mobility, safety, oxygenation, comfort, rest, sleep, and elimination. (fall, spring)

NRSE 3031 Foundations Practicum (4 credits)—– *Prerequisite(s): Completion of second semester, sophomore courses; Corequisite: NRSE 3030*. This course focuses on the development of nursing skills. Students use the concepts of caring, nursing process, critical thinking, and communication to provide nursing care for adults with diverse health needs. (fall, spring)

NRSE 3070 Care of Young Adults and Childbearing Families (3 credits)—*Prerequisite: Completion of first semester, junior courses. Corequisite: NRSE 3071*. Course content focuses on the health care of young adults as clients within the family and as members of the community. Reproductive health is a core component of the course with emphasis on nursing assessment, family planning, health promotion, and risk reduction during the childbearing cycle. (fall, spring)

NRSE 3071 Care of Young Adults and Childbearing Families Practicum (3 credits)—*Corequisite: NRSE 3070*. This course focuses on care of young adults and families during the childbearing cycle. (fall, spring)

NRSE 3080 Care of Children and Their Families (3 credits)—*Prerequisite: Completion of first semester, junior courses; corequisite: NRSE 3081.* The course focus is on the care of infants and children from birth to preadolescence experiencing developmental and/or situational circumstances that may affect health. Emphasis is placed on physical and developmental assessment, nursing interventions to promote or restore health, and assisting children and their families in adaptation to hospitalization and chronic or terminal illnesses. (fall, spring)

NRSE 3081 Care of Children and Their Families Practicum (3 credits)—*Corequisite: NRSE 3080*. This course focuses on the health care of infants and children. Diverse settings are used to plan and evaluate nursing care that includes primary prevention strategies, as well as acute, chronic, and terminal care. (fall, spring)

NRSE 3090 Care of Persons with Psychiatric Disorders (3 credits)—*Prerequisite: Completion of first semester, Junior courses*; *corequisite: NRSE 3091*. Course content focuses on the psychiatric-mental health care of persons across the lifespan as clients within the family and as members of the community. Emphasis is placed on effective communication, assessment and analysis, planning or nursing strategies, nursing diagnoses, and evaluating outcomes in this client population. (fall, spring)

NRSE 3091 Care of Persons with Psychiatric Disorders Practicum (3 credits)—*Corequisite: NRSE 3090*. This course offers students opportunities to participate in the psychiatric care of children, adolescents, and/or adults in diverse environments. Students participate in the care of the acutely ill and chronically ill psychiatric patient. (fall, spring)

NRSE 3170 Transition to Professional Practice for Licensed Practical Nurses (3 credits)—*Prerequisite(s): 2030, and NRSE 2020; Corequisite(s): NRSE 3010*. This course is designed as a transition course for the Licensed Practical Nurse pursuing a baccalaureate degree in nursing. The course focuses on validation and enhancement of previously learned skills, as well as the development of new knowledge and skills for the practice of professional nursing in the 21st century. (fall, spring, summer)

NRSE 3220 Nursing Theory and Research (3 credits) — *Prerequisite: Statistics course and NRSE 2020*. This course introduces the student to the role of research in evidence-based practice and in the development of nursing knowledge. The evolution of nursing theory is explored with an emphasis on the relationship between research, theory, and nursing practice. (fall, spring, summer)

NRSE 3300 Promoting Academic Success in Nursing (1 credit)—*Prerequisite(s): Admission to the nursing major*. This course is designed to promote academic success in nursing students through their understanding of test taking and study skills, and the application of these skills on nursing tests. (fall, spring)

NRSE 3302 Enhancing Achievement Strategies in Nursing (1 credit) — This course is designed to enhance achievement in nursing students' individualized learning through application of a variety of learning skills. (fall, spring)

NRSE 4008 Honors Mentorship in Nursing (1 credit) — *Prerequisite(s): Acceptance into the College of Nursing Honors in Discipline Program.* An individualized course in which the student collaborates with a mentor to create a program of learning that supports academic and professional goals. May be taken twice for credit. (fall, spring)

NRSE 4017/5017 Health Care Informatics (3 credits)—*Prerequisite(s): Permission of the instructor.* Current and potential applications of the computer to health care are discussed. These same applications are analyzed for their impact on the client, health care professional, and health care delivery system. Requires access to a computer with a browser that facilitates access to the World Wide Web and a university or private sector electronic mail account.

NRSE 4018 Nursing Honors Thesis (3 or 6 credits)—*Prerequisite(s): Admission to the College of Nursing Honors in Discipline Program, Honors Mentorship in Nursing, or permission of instructor*. An independent course for the senior-level honors student to complete a thesis suitable for presentation. The written paper will demonstrate scholarship, basic understanding of the research process, and relevance to professional trends and issues. (fall, spring)

NRSE 4027/5027 Health Care Law (3 credits)—*Prerequisite(s): Junior level or higher*. This course focuses on the influence of state and federal laws and ethics on patients, practitioners and practice settings. (fall, spring)

NRSE 4037/5037 Community Concepts for Public Health Nurses (3 credits)—*Prerequisite(s): Licensed Registered Nurse or permission of the instructor*. This course is primarily designed for nurses working in the public health field. Principles of community assessment, program development, and evaluation will build on prior work experiences of the students. Development of community partnerships and community leadership will be emphasized. (summer)

NRSE 4040 Care of the Adult (4 credits)—*Prerequisite: Completion of second semester junior courses*; *Corequisite: NRSE 4041.* Content of this course covers the nursing care of adults with emphasis on commonly occurring acute health problems. (fall, spring, summer)

NRSE 4041 Care of the Adult Practicum (4 credits)—*Corequisite: NRSE 4040*. This practicum focuses on the care of a cross section of adults with common and acute health problems emphasizing planning, evaluating, and managing nursing care. (fall, spring, summer)

NRSE 4050 Care of Older Adults (3 credits)—*Prerequisite(s): Completion of second semester, junior courses; Corequisites: NRSE 4051.* Content of this course focuses on the care of the older adult emphasizing (a) the promotion of health in the elder; (b) restoration and rehabilitation for the ill elder; (c) chronicity and the elder; and (d) palliative measures for the dying client. (fall, spring, summer)

NRSE 4051 Care of the Older Adult Practicum (3 credits) — *Corequisite: NRSE 4050*. This practicum will focus on the nursing care of the older adult in long-term and community environments emphasizing planning, evaluating, and managing nursing care. (fall, spring, summer)

NRSE 4060 Transition to Professional Practice (3 credits)— *Prerequisite(s): Completion of first semester, senior courses*; *corequisite: NRSE 4061*. This capstone course concentrates on theories, research and issues related to leadership, change, and management of nursing practice within the broader context of health care delivery. (fall, spring)

NRSE 4061 Senior Practicum (8 credits)—*Corequisite(s): NRSE 4060*. This capstone clinical course is focused on the preparation of the student for transition to professional nursing practice. (fall, spring)

NRSE 4062 R.N. Practicum (8 credits)—*Corequisite(s): NRSE 4060 and active license as a registered nurse*. This capstone course is focused on the education of the registered nurse for transition to profession nursing practice. (summer)

NRSE 4110 Population-based Nursing Care I (3 credits) — *Prerequisite: Completion of second semester junior courses*. This course is an introduction to the nursing care of populations and allows students to explore the public health sciences, health policy, public health ethics, health care delivery, and the community health nurse's role. All students will assess the historical, social, political, economic, environmental, educational, health, and cultural aspects of a community and populations. (fall, spring)

NRSE 4120 Population-based Nursing Care II (3 credits) — *Prerequisites: Completion of first semester, senior courses; NRSE 4110*. In this course, students focus on partnering with a community in order to promote the health of an identified population. Students implement nursing care with a selected population utilizing epidemiological methods and interdisciplinary collaboration and build upon their earlier work within a community of choice. (fall, spring)

NRSE 4260 Introduction to Critical Care Nursing (2 credits)— *Prerequisite(s): NRSE 4040, NRSE 4041, NRSE 4050, NRSE 4051, or permission of instructor*. This course presents specific content for care of the critically ill adult, including advanced technology, nursing skills, nursing assessments, and nursing interventions. (fall, spring)

NRSE 4267/5267 Nursing Management of the Critically Ill Adult (3 credits)—*Prerequisite(s): Current R.N. Licensure, or permission of the instructor, an Arrhythmia or Dysrhythmia course*. Comprehensive, systems-based nursing care of the critically ill adult client utilizing the nursing process with emphasis on health maintenance and restoration concepts, client and family psychosocial issues, and ethical-legal issues. Elective (fall, spring)

NRSE 4300 Skills Validation (1 credit)—*Prerequisite(s): Admission to the nursing major*. Selected clinical skills will be reviewed and validated specific to the student's particular level in the nursing program. May be repeated. Elective (fall, spring)

NRSE 4507/5507 Social Concerns and Women's Health (3 credits)—This course addresses the historical perspectives and current status of women's health, special concerns related to women's health and the economic, political, and cultural factors which impact women's health. (spring)

NRSE 4807/5807 Global Health Issues (3 credits)—*Prerequisite(s): Health science division major or permission of instructor*. This course is designed for both health science division students and health care providers interested in increasing their understanding of international and cross-cultural health. The course focuses on issues and skills that will enhance the practice of health science personnel, especially those intending to apply their skills in settings outside the United States. Elective (summer)

NRSE 4900 Nursing Independent Study (1-3 credits) (fall, spring)

NRSE 4907/5907 International Primary Health Care Practicum (3 credits)—*Prerequisite(s): NRSE 4807/5807 or the equivalent*. Undergraduate nursing students must have completed junior-level nursing courses or obtain permission of instructor. This course is designed for participants to directly experience cross-cultural and/or international health care to increase their health care delivery skills and understanding of other health care systems. Students will travel and live in the context of the host culture. All travel-related costs are met by the participating student. Elective (summer)

NRSE 4957/5957 Special Topics in Nursing (1-6 credits)— *Prerequisite(s): Permission of the instructor*. Special topics related to nursing and health care will be presented. Course may include didactic and experiential methods of instruction. May be repeated for credit if course content is significantly different or advanced. Elective (fall, spring)

NRSE 4989 Internship/Cooperative Education (1-3 credits)— *Prerequisite(s): Permission of department chair*. This course, with 1-3 credits, as arranged, allows the student to spend time in a career-related work experience. Formal agreements are established by the university and the employer to help students accomplish specific educational outcomes. Course is offered only on a pass/fail basis. Elective

Department of Kinesiology, Leisure and Sport Sciences
PEXS/PHED

FITNESS ACTIVITIES

(All courses in the Active Lifestyles and Wellness Program [PHED courses] are repeatable for credit.)

PHED 1115 Aerobics (1 credit)— This course offers various aerobic-style exercises to music. The purpose is to develop a healthy lifestyle, develop and maintain aerobic fitness, and understand the fundamentals of aerobic training and conditioning.

PHED 1120 AquaFitness (1 credit)—This course is taught on a very individualized basis in order to accommodate different skill and comfort levels, as well as a range of health problems. The major purpose of the course is to encourage participants to exercise in the pool on a regular basis and to adopt this activity as a routine part of their lifestyle.

PHED 1130 Fitness for Life (2 credits)—The Fitness for Life course presents specific activities, workout sessions, and health/fitness assessments through lectures and demonstrations This course is composed of three elements, fitness assessment, lectures and demonstrations concerning principles of fitness, and fitness activity sessions. The purpose of the course is to help students develop and maintain a holistic fitness lifestyle. There is an additional fee associated with this class.

PHED 1135 General Conditioning (1 credit)—This course is designed to enable the student to design and implement a personal conditioning program within the context of the class. This course includes both general cardiovascular and strength conditioning.

PHED 1137 Fitness Walking (1 credit)—This course enables students to design and implement a personal walking conditioning program. This course concentrates primarily on the use of fitness walking as a means of improving cardiovascular efficiency.

PHED 1140 Strength Conditioning (1 credit)—The theory and techniques of strength conditioning, including those to improve health, endurance, body composition, and muscular strength. This course will allow the student to develop muscle bulk and tone through the weight lifting process. Muscle toning and shaping are the primary objectives of the course. However, students should expect to realize a significant increase in muscular strength.

PHED 1150 Weight Management Exercise (1 credit)—This course is designed for people who feel a need to lose weight. Students will participate in a weight loss program involving an assessment component (body fat analysis, diet counseling, etc.) and an individual exercise program. Program guidelines are provided by the American College of Sports Medicine. There is an additional fee associated with this class.

LIFETIME ACTIVITIES

PHED 2100 Relaxation for Health (1 credit)—This course instructs students in the practices of utilizing basic relaxation techniques for health and wellness.

PHED 2205 Archery (1 credit)—This course is designed to give students the rudimentary skills in shooting a bow and arrow, including skills, and knowledge of rules and strategies.

PHED 2210 Badminton (1 credit)—Students will be introduced to the fundamentals of badminton and learn to use the basic strokes of the serve (short and long) drive and clear strokes (forehand and backhand) to play a match. Students will learn proper court positions for executing these strokes and effective movement and court coverage. Some attention will be given to badminton terminology, etiquette, and match procedures so that students can conduct matches properly.

PHED 2215 Basketball (1 credit)—This course is designed to help students develop rudimentary skills in basketball such as dribbling, passing, shooting, and the development of offensive and defensive strategies.

PHED 2225 Bowling (1 credit)—Students will learn beginning bowling skills, rules, and strategies required to enjoy recreational bowling. There is an additional fee associated with this class.

PHED 2230 Fencing (1 credit)—Designed to allow students to develop fundamental skills in foil fencing. Students will learn the mechanics and strategies of fencing, as well as develop elementary judging skills. Foils, jackets, and masks are provided.

PHED 2233 Disc Sports (1 credit)—In this course, the skills needed for successful participation in disc sports will be presented. The skills will be applied along with the rules and strategies needed to participate in the disc sports of Ultimate, disc golf and other disc-related activities.

PHED 2235 Golf (1 credit)—This course will present the history, rules, skills, and techniques of golf. Students will learn fundamental golf skills (driving, pitching, chipping, and putting) throughout the semester and should be able to execute these skills at a proficient level through practice and individual play.

PHED 2255 Racquetball (1 credit)—This course will present the history, rules, skills, and techniques of racquetball. The student will develop racquetball skills throughout the semester and should be able to execute these skills at a proficient level through practice and tournament play.

PHED 2260 Softball (1 credit)—This course is designed to give students a foundation of fundamental skills and knowledge related to the game of slow-pitch softball.

PHED 2265 Soccer (1 credit)—This is a course designed to give students a foundation of fundamental skills and knowledge related to the game of soccer.

PHED 2270 Tennis (1 credit)—Students will be introduced to the fundamentals of tennis and learn to use basic strokes of the serve, return of serve, and ground strokes (forehand and backhand) to play a match. Students will learn proper court positions for executing these strokes and effective movement and court coverage. Some attention will be given to tennis terminology, etiquette, and match procedures so that students can conduct matches properly.

PHED 2275 Advanced Tennis (1 credit)—*Prerequisite(s): beginning tennis or display of tennis skills.* This course will present advanced tennis skills. Students will learn advanced strategies and rules for playing tennis.

PHED 2280 Volleyball (1 credit)—Knowledge, skills, and methods of power volleyball activities are taught. Emphasis will be placed on rules and beginning skills.

PHED 2305 Karate (1 credit)—History, knowledge, skills, and strategy involved in the study of classical karate and self-defense. Special emphasis will be placed on skills and strategy. There is an additional fee associated with this class.

PHED 2310 Judo (1 credit)—This course is designed to introduce Kodokan Judo in a traditional manner. Basic throws, choking, and blocking techniques will be taught. Training methods, ranking, protocol, and contest rules of the International Judo Federation will be used throughout the course. There is an additional fee associated with this class.

PHED 2315 Self-Defense (1 credit)—Basic strategy and skills used in self-defense. Special emphasis will be placed on developing a proper attitude toward self-defense and preventive measures in avoiding confrontations, as well as initiating self-defense techniques for escape. There is an additional fee associated with this class.

PHED 2400 Beginning Swimming (1 credit)—The purpose of this course is for students to learn beginning swimming skills and any additional swimming skills that can be completed during the semester.

PHED 2410 Advanced Swimming (1 credit)—Prerequisite(s): beginning swimming or display of swimming skills. This course will present advanced swimming skills primarily in the form of stroke work. The primary strokes taught will be the front crawl, breast stroke, side stroke, butterfly, and elementary back stroke. Pre-lifeguarding skills will also be developed.

PHED 2420 Lifeguarding (2 credit)—This course is designed to provide students with the skills and knowledge to meet certification requirements of the American Red Cross.

PHED 2430 Water Safety Instructor (3 credits)—This course is designed to fulfill the requirements of the American Red Cross for certification as a swimming instructor.

PHED 2440 Scuba (1 credit)—*Prerequisite(s): The scuba course is designed to provide basic instruction in snorkeling and scuba diving.* This course will lead to open water certification following the satisfactory completion of the written examination and checkout dive in open water. Certification is optional. There is an additional fee associated with this class.

PHED 2441 Advanced SCUBA Diving (1 credit)—*Prerequisite(s): Completion of PHED 2440 or equivalent certification and permission of instructor.* This course is designed to provide the Open Water Diver with advanced SCUBA skills obtained through additional classroom presentations beyond the basic level and at least five (5) open water SCUBA dives. The Advanced Open Water candidate will develop a more in-depth understanding of equipment, techniques, and safety factors associated with safely enjoying an advanced level of sport SCUBA diving.

PHED 2505 Camping and Canoeing (2 credit)—Designed to provide the students with camping and canoeing knowledge and skills through practical experience. Includes types of camping equipment, improvised equipment, and outdoor cooking. There is an additional fee associated with this class.

PHED 2507 Kayaking (1 credit)—This course is designed to provide the student with the knowledge and skills needed to participate in and enjoy kayaking as a recreational lifetime activity. Special emphasis will be given to the development of sound fundamental knowledge and skills such as paddling and steering techniques; rolling; fitting, care and use of equipment; personal safety skills; and reading moving water. Due to the nature of this course, all students will be required to make class field trips to paddling sites in the surrounding area. This course will be offered in conjunction with the Center for Physical Activity and will involve additional cost to cover the use of equipment and travel to paddling sites in the area.

PHED 2509 Kayak Touring (1 credit)—This course is designed to provide the student with the knowledge and skills needed to participate in and enjoy kayaking touring as a recreational lifetime activity. Special emphasis will be given to the development of sound fundamental knowledge and skills such as paddling and steering techniques; multi-day trip planning; packing equipment in the kayak; fitting, care and use of equipment.

PHED 2510 Horseback Riding/Equitation (1 credit)—General riding and equestrian skills are taught at the riding stables in Jonesborough, Tennessee. There is an additional fee associated with this class.

PHED 2515 Marksmanship (1 credit)—A study and application of the basic fundamentals of rifle and pistol marksmanship, to include safety. Students must supply their own ammunition.

PHED 2520 River Rafting (1 credit)—This course is designed to provide students with the knowledge and skills needed to participate in and enjoy river rafting as a recreational lifetime activity. Special emphasis will be given to the development of sound fundamental knowledge and skills such as paddling and steering techniques, selection, care and use of equipment, personal safety skills, and reading white water. Due to the nature of this course, all students will be required to make class field trips to rivers in the surrounding area.

PHED 2525 Rock Climbing (1 credit)—This course is designed to provide students with the knowledge and skills needed to participate in and enjoy basic rock climbing and rappelling. Special emphasis will be given to the development of sound fundamental knowledge and skills, such as knots and their uses, understanding the belay system, selection, care and use of equipment, and basic rock climbing and rappelling technique. Due to the nature of this course, all students will be required to make class field trips to different climbing locations in the surrounding area.

PHED 2527 Caving (1 credit)—This course is designed to provide the student with the knowledge and skills needed to participate in and enjoy caving as a recreational lifetime activity. Special emphasis will be given to the development of sound fundamental knowledge and skills such as equipment selection, use and management, descending and ascending techniques, selection of personal equipment, safety, basic cave mapping techniques, and understanding and appreciating the cave environment. Additional emphasis will be given to development of a socially responsible attitude toward use of natural resources. Due to the nature of this course, all students will be required to make class field trips to caving sites in the surrounding area. This course will be offered in conjunction with the Center for Physical Activity and will involve additional cost to cover the use of equipment and travel to caving sites in the area.

PHED 2530 Mountain Biking (1 credit)—This course is designed to provide students with the knowledge and skills needed to participate in and enjoy mountain biking as a lifetime activity. Special emphasis will be given to the development of sound fundamental knowledge and skills such as selection, care and use of equipment, riding techniques, basic bike repairs, personal safety skills, and riding with environmental awareness. Due to the nature of this course, all students will be required to make class field trips to different trail and mountain biking locations in the surrounding area.

PHED 2535 Canoeing (1 credit)—This course is designed to provide students with the knowledge and skills needed to participate in and enjoy canoeing as a lifetime activity. Special emphasis will be given to the development of sound fundamental knowledge and skills such as selection, care and use of equipment, both solo and tandem paddling techniques, transporting a canoe, personal safety skills, and reading moving water. Due to the nature of this course, all students will be required to make class field trips to different lakes and rivers in the surrounding area.

PHED 2540 Snowboarding (1 credit)—This course is designed to provide students with the knowledge and skills needed to participate in and enjoy snowboarding as a lifetime activity. Special emphasis will be given to the development of sound fundamental knowledge and skills such as selection, care and use of equipment. Due to the nature of this course, all students will be required to make class field trips to different snowboarding sites in the surrounding area.

PHED 2545 Snow Skiing (1 credit)—A practical learning experience dealing with snow skiing. Students take lessons from a certified ski instructor through the French Swiss Ski School in Blowing Rock, North Carolina. Students have an opportunity to ski different slopes in North Carolina. There is an additional fee associated with this course.

PHED 2550 Orienteering (1 credit)—Orienteering is an outdoor activity in which the participant utilizes the skills of topographic map reading and following directions by compass or other means to navigate over unfamiliar terrain. The skills of orienteering can be used to enjoy many outdoor pursuits such as camping, backpacking, hiking, cross-country skiing, fishing, and hunting, or the "sport" of orienteering.

PHED 2553 Backpacking (1 credit)—This course is designed to provide students with the knowledge and skills needed to participate in and enjoy backpacking as a recreational lifetime activity. Special emphasis will be given to the development of sound fundamental knowledge and skills such as selection, care and use of backpacking equipment, tents and their uses, fire building and cooking, menu and trip planning, personal safety skills, and backpacking with environmental awareness. Due to the nature of this course, all students will be required to make class field trips.

PHED 2555 Outdoor Living Skills (1 credit)—This course is designed to provide students with the knowledge and skills needed to participate in and enjoy outdoor living as a recreational lifetime activity. Special emphasis will be given to the development of sound fundamental knowledge and skills, such as selection, care and use of equipment, tenting, fire building and cooking, menu and trip planning, personal safety skills, and camping with environmental awareness. Due to the nature of this course, all students will be required to make class field trips.

Kinesiology, Leisure and Sport Sciences

Major-Minor Courses

PEXS 2701 Aquatics (1 credit)—Knowledge, skills, and methods of basic water safety, survival, and rescue techniques.

PEXS 2955 Care and Prevention of Athletic Injuries (3 credits)—Basic principles in the prevention, recognition, and care of athletic injuries are presented. Students will also learn the duties of an athletic trainer and sports medicine team. $20 lab fee required.

PEXS 3000 Physical Education Programs for the Elementary Schools (3 credits)—Study of the curricular content of the elementary school physical education program which includes components relating to the development of physical fitness, perceptual motor skills, rhythmical movement education, and educational game activities. This course is for students in elementary education programs. Field experience is required.

PEXS 3005 Instructional Delivery Techniques for Movement (3 credits)—The purpose of this course is to assist prospective teachers and movement instructors in acquiring the fundamental knowledge and skills needed to promote learning. Opportunities will be provided for students to learn and practice the essential skills of effective instruction and delivery. Instruction will be provided to assist students in developing the skills of reflective thinking, problem solving, and working with individuals with different cultural perspectives.

PEXS 3008 Honors Service-Learning (1 credit)—*Prerequisite(s): Admission to the College of Education's honors program and HDAL 2008*. Honors service-learning in social/cultural agencies and programs related to education.

PEXS 3021 Theory and Techniques of Coaching Tennis (2 credits)—An introduction to the organization and administration of a tennis team.

PEXS 3022 Theory and Techniques of Coaching Track and Field (2 credits)—Theory and practice of the techniques involved in coaching track and field.

PEXS 3032 Psychomotor Development in Children (3 credits)—This course will provide instruction in the psychomotor development of children, with special consideration for capabilities, diagnostic tests, and perceptual-motor programs. Field experience is required.

PEXS 3061 Theory and Techniques of Coaching Basketball (2 credits)—Theory and practice in the coaching of basketball. Emphasis will be placed on coaching philosophies, fundamental skills, and offensive and defensive strategies.

PEXS 3062 Theory and Techniques of Coaching Volleyball (2 credits)—Theory and practice in coaching fundamentals of power volleyball. Emphasis will be on coaching philosophies, basic skills, and strategies.

PEXS 3071 Theory and Techniques of Coaching Football (2 credits)—Theory and practice in the coaching of football. Emphasis will be on coaching philosophies, fundamentals, psychology, and strategies.

PEXS 3072 Theory and Techniques of Coaching Baseball (2 credits)—Theory and practice in coaching fundamentals of baseball. Emphasis will be placed on coaching philosophies, basic skills, and strategies.

PEXS 3080 Teaching Aerobic Conditioning (3 credits)—Includes the theory and teaching techniques of the principles of aerobic fitness as it relates to exercise to music (aerobic dance), exercise in water (aqua fitness), and jogging/running. These components will be incorporated into a conditioning program designed to bring improvement in health relative to flexibility, body composition, and cardiovascular endurance.

PEXS 3085 Teaching Rhythms and Gymnastics (3 credits)—This course will present a broad base of information as it relates to fundamental movement skills, teaching techniques, and vocabulary basic to elementary rhythmical activities.

PEXS 3095 Teaching Sports Skills (3 credits)—The purpose of this course is to teach students performance and instructional skills for selected individual, dual, and team sports.

PEXS 3510 Foundations of Physical Education and Sport (3 credits)—This course is designed as an introduction to the historical, philosophical and sociological foundations of physical education and sport.

PEXS 3610 Exercise Physiology I (3 credits)—*Prerequisite(s): HSCI 3000 and HSCI 3020.* The study of the physiological responses and adaptations of the human body to exercise and training.

PEXS 3850 Scientific Basis of Human Performance (4 credits)—*Prerequisite(s): HSCI 2010/11 or HSCI 2020/21***.** This course is designed to provide a student with an understanding of the scientific principles of human performance. Students will learn how training and detraining affect various aspects of an individual's physiological, biochemical, and biomechanical performance attributes.

PEXS 4001 Teaching Sports Skills II (3 credits)—The purpose of this course is to teach students performance and instructional skills for selected team sports.

PEXS 4007/5007 Elementary Physical Education Methods (3 credits)—*Prerequisite(s): PEXS 3005, PEXS 3032, and admitted to Teacher Education*. This course is designed to provide instruction and experiences in program content, teaching methods, and learning styles for developmentally appropriate physical education program for children ages 5 to 19. Emphasis will be place on movement education, rhythm, body management, fundamental motor skills, and fitness/wellness appropriate to the kindergarten through fifth grade child. Field experiences will include working with students at University School during class time, as well as observing for twenty (20) hours at designated elementary schools.

PEXS 4018 Honors Thesis (3-6 credits)—Open to those in university honor programs only. A capstone experience serving as the culmination of an honors curriculum.

PEXS 4060 Measurement and Evaluation in Physical Education (3 credits)—A course designed to acquaint future teachers with techniques of evaluating and measuring the process of physical education and the psychomotor, cognitive, and affective domains of the student.

PEXS 4061 Exercise Fitness Testing (3 credits)—(PEXS 3610 can be taken concurrently.)The purpose of this course is to provide knowledge in exercise testing and prescription for healthy populations. Students will develop the skills and technical procedures necessary in the training of exercise fitness technologists. Hands-on experience will be available in the following: underwater weighing, VO2 max testing, treadmill, ergometer cycle, and other laboratory tests and equipment.

PEXS 4062 Cardiovascular Exercise Testing and Electrocardiography (3 credits)—This course is designed to provide the student with the background needed to function as a clinical exercise specialist. Additionally, the course will provide the background to allow the student to obtain exercise specialist or other clinical specialty certifications, offered by the American College of Sports Medicine and other internationally recognized organizations.

PEXS 4150 Special Olympics Coaching (3 credits)—Designed to provide students with the knowledge and skills necessary to apply for coaching certification through Special Olympics International, Inc., in the areas of bowling, aquatics, and athletics. Approximately one-third of the course will be a field experience working with Special Olympic athletes.

PEXS 4250 Physical Education Activities for Atypical Populations (3 credits)—*Prerequisite(s): PEXS 3005 and PEXS 3032.* A study of the legal, medical, and educational bases for physical activity programs for individuals with disabilities, with emphasis on evaluation, placement, and instruction. Field experience is required.

PEXS 4270 Structural Kinesiology (3 credits)—*Prerequisite: Required: HSCI 3000, Recommended: HSCI 3020, physics*. An introduction to the study of the anatomical bases of human movement, with emphasis on bone growth and development, joint structure and movement potential, and muscular involvement during movement.

PEXS 4370 Exercise and Sport Psychology (3 credits) — This course examines how individuals behave in physical activity, exercise, and sport settings. Psychological antecedents and consequences of primary and secondary involvement in exercise, sport, and related physical activities will be introduced.

PEXS 4600 Athletic Coaching Practicum (3 credits)—*Prerequisite(s): See department*. Provides the student with the opportunity to be actively involved in a middle, junior high, or secondary coaching experience. Includes the application of theoretical knowledge to practical situations.

PEXS 4620 Exercise Physiology II (3 credits)—*Prerequisite(s): BIOL 1110/11, CHEM 1310/11, CHEM 1320/21, HSCI 3000/20, PEXS 3610*. This course presents a foundation for understanding the underlying mechanisms behind the physiological and biochemical acute responses to exercise and also discusses the long-term physiological and biochemical adaptations to exercise.

PEXS 4630 Exercise Science Internship I (6 credits)—*Prerequisite(s): PEXS 3610, PEXS 3695, PEXS 4061 and permission of instructor.* This course is designed to provide the student with an actual worksite experience in the area of exercise science. The internship experience will require a minimum of 240 hours of field experience.

PEXS 4631 Exercise Science Internship II (6-12 credits) — *Prerequisite(s): PEXS 3610, PEXS 3695, PEXS 4061, and permission of instructor.* This course is the second in a series designed to provide the student with an actual worksite experience in the area of exercise science. The internship experience will require a minimum of 240 hours of field experience.

PEXS 4650 Strategies in Developing Wellness Programs (3 credits)—*Prerequisite(s): PEXS 3650.* This course was designed to provide students with an opportunity to evaluate current wellness program strategies at the educational (K-12 initiatives), university, community, corporate, and clinical setting.

PEXS 4656 Sport Conditioning and Training (3 credits) — *Prerequisite: PEXS 3610 Exercise Physiology I*. The study of the theory and application of biomechanics and sport science and the development of strength and conditioning programs for a given sport or athlete.

PEXS 4657 Sports Nutrition and Ergogenic Aids (3 credits) — This course is designed to provide the student with an understanding of how to enhance athletic performance with proper nutrition. Examines principles of nutritionally sound diets for endurance, speed and strength-related activities. Special nutritional needs will also be discussed (e.g. gaining muscle mass or lowering body fat content).

PEXS 4700 Secondary PE I Lifetime Wellness (3 credits)—This course is designed to provide content knowledge and methodological skill necessary for the physical education specialist to develop and implement a physical education curriculum for the middle/high school setting. Emphasis will be placed on curriculum planning, sports, physical fitness activities, and dance that are developmentally appropriate for middle/high school students.

PEXS 4717/5717 Secondary Wellness Education (3 credits)—*Prerequisite(s): PEXS 2955, PEXS 3005, PEXS 3032, PEXS 3080, and admission to Teacher Education.* This course provides students with content knowledge and pedagogical skills necessary to teach lifetime wellness in the secondary school.

PEXS 4900 Independent Study (1-3 credits)—*Prerequisite: Completed contract must be on file in department prior to registration.* Designed for students who, under the direction of a KLSS faculty member, wish to engage in independent research or intensive study of pre-determined topic(s).

PEXS 4977/5977 Exercise Management for Persons with Chronic Diseases and Disabilities (3 credits)—*Prerequisite(s): PEXS 3610*. This course will examine chronic diseases and disabilities that occur in many individuals. It is oriented toward understanding the disease, the effects exercise may have on the disease, and modifications to general exercise programs. Annually

Philosophy
PHIL

PHIL 1030 Introduction to Philosophy (3 credits)—An introduction to some central philosophical problems concerning free will, the self, science, and reality. (fall, spring, summer)

PHIL 1228 Honors Quest for Meaning and Values II (3 credits)—Open to those in the Honors Scholars Program only. The second part of a humanities course that aims at developing cultural understanding while honing critical reading and writing skills. (spring)

PHIL 2020 Introduction to Ethics (3 credits)—An introduction to some central philosophical problems concerning morality, freedom, and political authority. (fall, spring, summer)

PHIL 2030 Practical Reasoning (3 credits)—An introductory study of formal and informal reasoning in practical contexts (editorials, speeches, advertising, etc.) Also includes a study of syllogistic reasoning, the scientific method, definition, and clear writing. (fall, spring, summer)

PHIL 2040 Philosophy as Conversation (3 credits)—An introduction to philosophy as self-examination. Focus on discussion of the beliefs and values of the students in the class. (fall, spring, summer)

PHIL 2640 Science and the Modern World (3 credits)—A philosophical examination of central ideas of modern science and technology. (fall, spring, summer)

PHIL 3010 History of Ancient Philosophy (3 credits)—*Prerequisite(s): Two (2) PHIL courses at the 1000 - 2000 level, or permission of the instructor*. The development of Western philosophy in the Greek world from the pre-Socratic philosophers to Plotinus. Major emphasis on Socrates, Plato, and Aristotle. (fall)

PHIL 3030 History of Modern Philosophy (3 credits)—*Prerequisite(s): Two (2) PHIL courses at the 1000 - 2000 level or permission of the instructor*. An examination of European philosophical thought from approximately 1600 to 1850. Figures to be studied include Descartes, Spinoza, Locke, Hume, and Kant. (spring)

PHIL 3050 Symbolic Logic (3 credits)—*Prerequisite(s): Two (2) PHIL courses at the 1000 - 2000 level or permission of the instructor*. Introduction to modern logic. This course explores the formal nature of language and reasoning. Propositional logic, predicate logic, and related topics. (fall, odd years)

PHIL 3061-63 Philosophy Colloquium (1-3 credits)—*Prerequisite(s): Two (2) PHIL courses at the 1000 - 2000 level or permission of the instructor*. Each semester some important issue, movement, or person of philosophical concern will be studied. May be repeated for up to nine (9) credits. (3061 – spring, odd years; 3062 – fall; 3063, fall, spring)

PHIL 3110 Philosophies of Feminism (3 credits)—*Prerequisite(s): Two (2) PHIL courses at the 1000 - 2000 level or permission of the instructor*. Examination of the major forms of feminist theory and also the role, functions and limitations of theory in addressing gender-related issues. (fall, even years)

PHIL 3120 Existentialism (3 credits)—*Prerequisite(s): Two (2) PHIL courses at the 1000 - 2000 level or permission of the instructor*. Studies in 19th and 20th century existentialism with special emphasis upon its literary expression. Philosophers and writers include Kierkegard, Ibsen, Dostoevsky, Buber, Marcel, Camus, and Sartre.(fall, odd years)

PHIL 3140 Environmental Philosophy (3 credits)—*Prerequisite(s): Two (2) PHIL courses at the 1000 - 2000 level or permission of the instructor*. Examines the philosophical issues–ethical, metaphysical and epistemological–involved in contemporary discussions of environmental issues. Widely differing approaches will be considered in order to better understand the conflicting interests and values involved in environmental decision-making. (spring, even years)

PHIL 3150 Philosophy of Law (3 credits)—*Prerequisite(s): Completion of one lower division PHIL course*. An exploration of major themes in the Philosophy of Law: the nature of law, judicial reasoning, the moral limits of criminal and tort law, liberty, equality, and justice. (fall, odd years)

PHIL 3160 Native American Thinking (3 credits)—*Prerequisite(s): At least, one PHIL course at the 2000 level or permission of the instructor*. Drawing on the philosophical/religious perspectives of the Lakota, Hopi, Navaho, Nootka, Cherokee, and other native American tribes. This course will examine differing notions of time, place and space, motion, identity, and the holy. (spring, odd years)

PHIL 3170 Philosophy of Mind (3 credits) — *Prerequisites: Two (2) PHIL courses at the 1000 or 2000 level, or permission of the instructor*. A critical survey of the leading theories of mind and their variants, focusing on contemporary issues in the mind-body relation, consciousness, thought and other mental processes, neuroscience, artificial intelligence, and free will. (spring, even years)

PHIL 4017/5017 Ethical Theory (3 credits)—*Prerequisite(s): At least one (1) PHIL course at the 3000 level or permission of the instructor*. History of ethics from ancient Greece to the present Special emphasis on the theories of Aristotle, Kant, and Mill. (fall)

PHIL 4018 Honors Thesis (3 - 6 credits)—Open to those in university honor programs only. A capstone experience serving as the culmination of an honors curriculum. (fall, spring)

PHIL 4047/5047 Philosophy of Religion (3 credits)—*Prerequisite(s): At least one (1) PHIL or RELI course at the 3000 level or permission of the instructor*. An examination of classical and contemporary discussions of philosophical issues about religion, including the nature of God, of human beings, and of religious truth, and contemporary discussions of religion and atheism. (spring, odd years)

PHIL 4157/5157 Philosophy of Art (3 credits)—*Prerequisites: Either two courses in either philosophy or art history, or permission of the instructor*. A discussion of philosophical issues that arise in our attempts to understand the creation, appreciation, and criticism of the various literary, plastic, and performing arts.

PHIL 4067/5067 Philosophy in Literature (3 credits)—*Prerequisite(s): At least one (1) PHIL course at the 3000 level; or permission of the instructor*. An examination of philosophical issues as they appear in the world's literature, including poetry, fiction, and essays. (fall, even years)

PHIL 4077/5077 Contemporary Continental Philosophy (3 credits) — *Prerequisite: At least one (1) of the following: PHIL 3010 or 3030, or permission of the instructor*. A survey of the developments in European philosophy from the late 19th century to the present. Topics may include phenomenology, hermeneutics, deconstruction, post-structuralism, critical theory, and philosophies of difference. (spring, even years)

PHIL 4087/5087 Topics in Analytic Philosophy (3 credits) — *Prerequisite: At least one (1) PHIL course at the 3000 level or permission of the instructor*. A survey of the developments in analytic philosophy from the late 19th century to the present. Topics may include logical atomism, logical positivism, ordinary language philosophy, naturalism, conceptual analysis, analytic epistemology, analytic metaphysics, and meta-ethics. (spring, odd years)

PHIL 4107/5107 Classical Political Philosophy (3 credits)—*Prerequisite(s): At least one (1) PHIL course at the 3000 level; or permission of the instructor*. An examination of the classical tradition in political thought with emphasis on reading the works of Plato and Aristotle, as well as those of later representatives of this tradition. (fall, even years)

PHIL 4127/5127 Modern Political Philosophy (3 credits)—*Prerequisite(s): At least one (1) PHIL course at the 3000 level; or permission of the instructor*. An examination of modern political thought with emphasis on the Social Contact theories of Hobbes, Locke, and Rousseau and the Utilitarianism of Bentham, Mill, and others. (fall, odd years)

PHIL 4137/5137 Marxism (3 credits)—*Prerequisite(s): At least one (1) PHIL course at the 3000 level; or permission of the instructor*. A study of the basic ideas of Marx and his contemporary interpreters in Eastern Europe, Asia, and the Third World. (spring, odd years)

PHIL 4140 Topic in Political Philosophy (3 credits)—*Prerequisite(s): At least one (1) PHIL course at the 3000 level; or permission of the instructor.* An examination of selected topics in political philosophy chosen by the professor. Course may be repeated, provided that the content of the course significantly varies from previous offerings. (fall, even years)

PHIL 4900 Independent Studies in Philosophy (1-3 credits)—*Prerequisite(s): At least one (1) PHIL course at the 3000 level or permission of the instructor.* (fall, spring)

PHIL 4917/5917 Philosophy of the Biological and Biomedical Sciences (3 credits)—*Prerequisite(s): At least one (1) PHIL course at the 3000 level or permission of the instructor.* Topics of philosophical and theoretical interest generated by the biological and biomedical sciences Includes consideration of the broader social and cultural implications of biological and biomedical theory. (fall, odd years)

PHIL 4950 Senior Seminar (1-3 credits)—*Prerequisite(s): Senior status or permission of the instructor.* This course focuses on philosophical research and methods and is intended as a capstone course for majors. Students will learn to develop and apply research skills through pursuit of a supervised research project. (spring)

PHIL 4957/5957 Special Topics in Philosophy (1-6 credits) — *Prerequisite(s): At least one (1) PHIL course at the 3000 level or permission of the instructor.* (spring)

* *Cross-listed with ENGL 1218*
** *Cross-listed with ENGL 1228*

Physics
PHYS

Note: See Astronomy (ASTR) for listing of astronomy courses.

PHYS 1030 Introduction to Physics Survey (4 credits)—Presents an interdisciplinary approach to the physical sciences with a concentration in physics. Relates the role of science to the daily activities of an educated person. Three hours lecture, one hour demonstration/discussion each week. Not open to students who have any previous college credit in any of the physical sciences.

Note: Lecture courses requiring a lab can be taken together or separately, but must both be completed by graduation.

PHYS 2010 General Physics I-Noncalculus (3 credits)—A survey of the topics in classical physics intended primarily for students in pre-professional curricula and majors in various engineering technology concentrations. (Engineering transfer students should take Physics 2110.) Topics include mechanics, solids, fluids, and thermodynamics. **A good working knowledge of algebra and trigonometry (at least at the high school level) is required before taking this course.** Heavy emphasis is made for the solutions to numerical problems. PHYS 2010 is the first semester of a two-semester sequence in general physics. (Many curricula require a laboratory course in physics. Students in these curricula must also take PHYS 2011.) Three hours of lecture each week.

PHYS 2011 General Physics Laboratory I-Noncalculus (1 credit)—Experiments dealing with the basic laws of physics, designed to reinforce and supplement concepts learned in PHYS 2010. **A good working knowledge of algebra and trigonometry (at least at the high school level) is required before taking this course.** One (2) two-hour lab each week.

Note: Lecture courses requiring a lab can be taken together or separately, but must both be completed by graduation.

PHYS 2020 General Physics II-Noncalculus (3 credits)—*Prerequisite: PHYS 2010.* A survey of the topics in classical physics intended primarily for students in pre-professional curricula and majors in various engineering technology concentrations. (Engineering transfer students should take Physics 2120.) Topics include electricity and magnetism, wave mechanics, and geometric optics. **A good working knowledge of algebra and trigonometry (at least at the high school level) is required before taking this course.** Heavy emphasis is made for solutions to numerical problems. PHYS 2020 is the second semester of a two-semester sequence in general physics. (Many curricula require a laboratory course in physics. Students in these curricula must also take PHYS 2021.) Three hours of lecture each week.

PHYS 2021 General Physics Laboratory II-Noncalculus (1 credit)—*Prerequisite: PHYS 2011.* Experiments dealing with the basic laws of physics, designed to reinforce and supplement concepts learned in PHYS 2020. **A good working knowledge of algebra and trigonometry (at least at the high school level) is required before taking this course.** One (2) two-hour lab each week.

PHYS 2110 Technical Physics I-Calculus Based (5 credits)—A survey of physics for students majoring in technical fields, such as physics, chemistry, engineering, etc. Students in pre-professional studies (pre-med, pre-dentistry, etc.) who desire a stronger preparation for professional school also can take this course. Topics include classical mechanics and thermodynamics. **One semester of calculus is required before taking this course.** Heavy emphasis is made for the solutions to numerical problems. PHYS 2110 is the first semester of a two-semester sequence in calculus-based classical physics. Three hours lecture and three hours of laboratory/recitation each week.

PHYS 2120 Technical Physics II-Calculus Based (5 credits)—*Prerequisite: PHYS 2110.* A survey of physics for students majoring in technical fields, such as physics, chemistry, engineering, etc. Students in pre-professional studies (pre-med, pre-dentistry, etc.) who desire a stronger preparation for professional school also can take this course. Topics include classical electromagnetism and optics. **One semester of calculus is required before taking this course.** Heavy emphasis is made for the solutions to numerical problems. PHYS 2120 is the second semester of a two-semester sequence in calculus-based classical physics. Three hours lecture and three hours of laboratory/recitation each week.

PHYS 2810 Statics (3 credits) — *Prerequisites: MATH 1910 and 1920; Corequisite: PHYS 2110.* This is a calculus-based course in applied mechanics of engineering statics. Topics covered will include vectors, Newton's laws, moments (torque), equilibria of rigid bodies, and aspects of friction. Three hours lecture each week.

PHYS 2820 Dynamics (3 credits) — *Prerequisites: MATH 1910 and 1920; Corequisite: PHYS 2120.* This is a calculus-based course in applied mechanics of engineering dynamics. Topics covered will include kinematic equations of motion, Newton's laws, rotational motion, energy, collisions, and vibrations. Three hours lecture each week.

PHYS 3010 Mechanics (4 credits)—*Prerequisite(s): PHYS 2110/20.* Statics and dynamics of particles and systems of particle. An introduction to Lagrangian and Hamiltonian formulations of Newtonian mechanics. Three hours lecture and one hour recitation each week.

PHYS 3210 Optics (4 credits)—*Prerequisite(s): PHYS 2110/20.* Geometrical optics including reflection, refraction, dispersion, thin and thick lenses, optical instruments. Physical optics including electromagnetic character of light, interference, diffraction, polarization, and related topics. Three hours lecture and one hour recitation each week.

PHYS 3310 Electrical Measurements (4 credits)—*Prerequisite(s): PHYS 2110/20.* AC/DC circuit analysis, basic electrical measurements, fundamentals of electronic circuits, with applications to devices of special interest. Two hours lecture and two (2) two-hour lab sessions each week.

PHYS 3410 Modern Physics Lab (2 credits)—*Prerequisites: PHYS 2110 and 2120.* PHYS 3410 is an advanced experimental course, structurally similar to lower-level General Physics Labs (PHYS 2011, 2021) offered to non-physics students. It is complementary to upper-level lecture courses including Atomic and Nuclear Physics, Optics, and Electromagnetic Theory. The course consists of a set of experimental problems covering selected topics in particle physics, atomic and molecular structure and wave phenomena.

PHYS 3510 Introduction to Biophysics (3 credits)—*Prerequisite(s): PHYS 2010/20 or PHYS 2110/20.* Underlying principles of physics used to explore and explain biological systems. Techniques discussed include energetics, X-ray analysis, absorption spectroscopy, etc., applied to cellular processes. Three (1) hours lecture or equivalent each week.

PHYS 3610 Introduction to Atomic and Nuclear Physics (3 credits)—*Prerequisite(s): PHYS 2110/20.* A semiquantitative introduction to the physics of the atom and its nucleus: constituent parts of atoms, atomic transmutation, nuclear fission and fusion, and related topics. Three hours lecture each week.

PHYS 3710 Electricity and Magnetism (4 credits)—*Prerequisite(s): PHYS 2110/20*. An intermediate-level course in electromagnetism: electrostatics, dielectrics, magnetic materials and effects, development of Maxwell's equations. Three hours lecture and one hour recitation each week.

PHYS 4007/5007 Computational Physics (4 credits)—*Prerequisite(s): PHYS 2110/20 or MATH 3200*. This course is designed to cover techniques used in numerically modeling physical systems and reduction of scientific data. Topics include data fitting; error analysis; numerical differentiation and integration; techniques to numerically solve systems of linear equations, ODEs, and PDEs; numerical solution to trajectory and orbit problems; and numerical Fourier analysis. Prior computer programming experience is desirable, but not mandatory.

PHYS 4018 Honors Thesis (3-6 credits)—Open to those in university honors programs only. A capstone experience serving as the culmination of an honors curriculum.

PHYS 4117/5117 Kinetic and Statistical Physics (4 credits)—*Prerequisite(s): PHYS 2110*. Kinetic theory of an ideal gas, equations of state, distribution of molecular velocities, principles of statistical mechanics, transport phenomena, applications of Boltzmann, Fermi-Dirac, and Bose-Einstein statistics. Three hours lecture and one hour recitation each week.

PHYS 4617/5617 Quantum Physics (4 credits)—*Prerequisite(s): PHYS 3610, PHYS 3010, and senior standing*. An introduction to quantum theory and nonrelativistic quantum mechanics. Historical development of ideas which led to present-day theories, Schroedinger's equation and applications, approximation methods, matrix methods, and related topics.

PHYS 4717/5717 Electromagnetic Theory (4 credits)—*Prerequisite(s): PHYS 3710*. Principles of electromagnetic theory, Maxwell's equations, selected applications, and related topics. Three (1) one credit lectures and one (2) two credit recitation session each week.

PHYS 4850 Seminar in Physics (1 credit)—A weekly two-hour session devoted to current research and/or teaching activities, and other topics of departmental interest. Attendance expected of physics majors. May be taken for credit twice provided student is active contributor to programs.

PHYS 4860 Special Topics in Physics (1-3 credits)—Study of a topic of interest to faculty and undergraduate students. May be repeated for credit (up to a maximum of four credits) provided subject matter is not duplicated.

PHYS 4900 Independent Studies (1-3 credits)—*Prerequisite(s): Prior acceptance by a faculty research advisor*. Independent investigation of a problem of interest to the student, under the guidance of a faculty research advisor. May be repeated (up to a maximum of four credits) provided subject matter is not duplicated.

Physical Therapy
PHYT

PHYT 2000 Introduction to Physical Therapy (2 credits)—This course will provide the student interested in physical therapy with an overview of the profession and the opportunities, problems, and realities thereof. Students will learn how their college experiences transfer to the working world and will engage in self-assessment and reflection designed to help the student determine if physical therapy is a good career match. (spring)

Public Management
PMGT

PMGT 2610 Introduction to Public Administration (3 credits)—Introduction to contemporary topics in public administration: defining the field, operations of the federal administration, theories of public management, budgeting and staffing.

PMGT 3100 Introduction to Urban and Regional Planning (3 credits)—An introductory survey of the modern and historical theories of urban and regional planning.

PMGT 4018 Senior Honors Seminar (3 credits)—*Prerequisite(s): ECON 3088 and admission to the College of Business and Technology Honors Program; by permit only*. A seminar for College of Business and Technology honors students who are working on senior honors theses or other approved projects. Upon successful completion of the course, students will have demonstrated the ability to complete the research process by creating a written product suitable for submission to the College of Business and Technology faculty.

PMGT 4087/5087 Recreation and Tourism Planning (3 credits)—A survey of recreation and tourism in the United States and their effect upon regional economic development and planning.

PMGT 4107/5107 Urban Geography and Planning (3 credits)—A geographical analysis of cities and urban regions, urban growth patterns, location and interaction analysis, planning for urban regions, and travel behavior are emphasized.

PMGT 4347/5347 Economic Development Planning (3 credits)—An introduction to the complexities of local economic development planning. Useful for students wishing to become economic or planning specialists and for community leaders interested in creating development strategies.

PMGT 4637/5637 Local and Regional Planning (3 credits)—Theories and techniques of planning for small cities, metropolitan areas, and geographic regions.

PMGT 4905 Urban Studies Internship (3 credits)—*Prerequisite(s): Completed a minimum of six credit hours at the upper-division level in the student's major; junior or senior standing; and at least a 2.7 GPA*. Students are selected through a competitive process for assignments in approved business or public sector organizations as interns under the supervision of the internship coordinator and field placement supervisors. Students may not earn more than three semester credits for this course which can be used as a free elective or an elective within a business major with prior approval by the chair.

Political Science
PSCI

PSCI 1110 Political Life (3 credits)—An encounter through reading, writing, discussion, and other class experiences with the phenomena of political life. Students will be encouraged to confront the orientations, expectations, and action patterns characteristic of situations where human beings attempt to resolve the tension between human needs and social facts.

PSCI 1120 Introduction to American Government (3 credits)—A survey of American government focusing on the United States Constitution, American political culture, political institutions, and policy processes.

PSCI 2210 Introduction to Comparative Politics (3 credits)—An introduction to the comparative study of politics, employing a conceptual, or thematic, approach. The politics of selected countries will be examined, focusing on major features such as governmental institutions, political culture and public policy.

PSCI 2220 Introduction to World Politics (3 credits)—An introduction to the major concepts and themes in the study of international politics designed to provide students with analytical tools for understanding problems and issues in international security, organization and political economy.

PSCI 2610 Introduction to Public Administration (3 credits)—Introduction to contemporary topics in public administration: defining the field, operations of the federal administration, theories of public management, budgeting and staffing. (AP)

PSCI 2989 Internship/Cooperative Education (1-3 credits)

PSCI 3000 Peace, Security, and Development (3 credits)—A global political analysis of issues and events which affect the peace, security, and development of human beings in the world community. (IR)

PSCI 3010 Chinese Politics (3 credits)—An introduction to the politics of China and the role of politics in Chinese history, culture and economy. (CP)

PSCI 3030 American Political Parties (3 credits)—A study of the political parties in the United States. The course examines the roles of political parties in elections and in the government, the coalitions and factions that make up the parties, the sources of party division and conflict, and the balance of power between competing political parties. (AP)

PSCI 3050 Interest Groups in American Politics (3 credits)—An examination of the role and influence of interest groups in American politics and government, with special attention to corporate business and organized labor. This course considers the implications of interest group politics for the distribution of power and for the shape of public policy in the United States. (AP)

PSCI 3060 Southern Politics (3 credits)—An introduction to regional political activity and its impact on the national political system as illustrated by the eleven states which are comprised of the Southeast. An in-depth study of the distinctive political system of the region, and the effects of movements such as secession and one-party control, black voting, and the changes in the socioeconomic composition of the area. (AP)

PSCI 3070 Politics and Film (3 credits)—An investigation of motion pictures as a mass medium. It is concerned with the political images, ideas and stories in the movies, as well as the politics surrounding movie production and distribution. (AP)

PSCI 3130 American Political Thought (3 credits)—An examination of various themes in American political thought using the writings of contemporary thinkers, as well as sources drawn from the past. (PT)

PSCI 3200 Law and Judicial Process (3 credits)—An overview of the political and philosophical principles underlying the American legal system. Strongly recommended prior to further work in law and the judicial process. (PL)

PSCI 3205 Constitution and Civil Liberties (3 credits)—A focus upon the First, Second, Fifth, Ninth, and Fourteenth Amendments as these have been utilized to expand and protect personal rights and liberties, including participation in the political process. The case method will be used. (PL) (Formerly PSCI 2500)

PSCI 3210 Due Process and Adjudication (3 credits)—A study of the liberties guaranteed in the Fourth, Fifth, Sixth, Eighth, and Fourteenth Amendments as developed and interpreted by court decisions. The case method will be used. (PL)

PSCI 3220 The Supreme Court (3 credits)—An analysis of the role of the Supreme Court of the United States in the governmental process, its role regarding the separation of powers and federalism, public policy, and limits on judicial power. The case method is sometimes used. (PL)

PSCI 3230 American Constitutional Law (3 credits)—An analysis of the manner in which the Constitution, including the Bill of Rights, has been expanded and developed to meet changing conditions within the polity by the judicial decision-making process. The case method will be used. (PL) (Formerly PSCI 4217)

PSCI 3310 International Relations (3 credits)—An introduction to the study of the relations between states, politics, diplomacy, international law, and organization. An analysis of the theory and practice of international relations. (IR)

PSCI 3350 International Political Economy (3 credits)—*Prerequisite: PSCI 2220*. This course will introduce students to current issues of international political economy. The course examines the interdependent and global nature of world economy and politics. (IR)

PSCI 3710 State and Local Government (3 credits)—The structure and functions of the 50 state governments and local government in the United States and the role of these governments in the American federal system Special references to government in Tennessee. (AP)

PSCI 3750 International Law and Organizations (3 credits)—*Prerequisite: PSCI 2220*. This course is an introduction to the international legal system and provides the students with the basic concepts, principles and rules of international law.

PSCI 3800 European Politics (3 credits)—A survey of the governmental institutions, the political processes, and the cultures of European states. (CP)

PSCI 3830 Government and Politics of Latin America (3 credits)—Broadly concerned with basic political, cultural, and economic characteristics of various Latin American political systems. (CP)

PSCI 3870 Government and Politics of South Asia (3 credits)—An examination of the government, political organizations, party structure, politics, and culture of the subcontinent. (CP)

PSCI 4018 Honors Thesis (3 - 6 credits)—Open to those in university honor programs only. A capstone experience serving as the culmination of an honors curriculum.

PSCI 4020 Urban Politics (3 credits)—A study of the politics of urban and metropolitan government, including: reformism, bossism, political cleavages, the role of blacks and other groups in the local political system, and procedures and problems related to local policy-making. (AP)

PSCI 4030 Black American Political Thought (3 credits)—*Prerequisite: PSCI 1120*. This course exposes students to major political philosophies of the Black American experience and introduces students to the Black community's desire for social equity through social/political action. (PT)

PSCI 4050 The Presidency (3 credits)—A study of the functions and powers of the modern presidency, with emphasis on the role of the president in public policy. (AP)

PSCI 4100 Classical Political Philosophy (3 credits)—An examination of the classical tradition in political thought with emphasis on reading the works of Plato and Aristotle, as well as those of later representatives of this tradition. (PT)

PSCI 4120 Modern Political Philosophy (3 credits)—An examination of modern political thought with emphasis on the Social Contract theories of Hobbes, Locke, and Rousseau and the utilitarianism of Bentham, Mill, and others. (PT)

PSCI 4160 The Idea of the City (3 credits)—An examination of the meaning and significance the city has had in human history and a consideration of its potential as a meaningful social and political force of the future. (PT)

PSCI 4300 International Politics (3 credits)—An analysis of the major forces and trends of the political relationships between states. the historical development of international politics, the pattern of contemporary international politics, and the future of international politics. special problems and prospects for the United States. (IR)

PSCI 4330 American Foreign Policy (3 credits)—An analysis of the development of American foreign policies and practices with emphasis on recent development and current trends. (IR)

PSCI 4450 Appalachian Politics (3 credits)—An examination of the political, economic, and social structures of power characteristic of the Appalachian region, and the relationship between these and the larger American context. Pre-summer only. (AP)

PSCI 4730 American Public Policy (3 credits)—A study of the economic and social policies of American national government. The course analyzes fiscal, monetary, social welfare, trade, and labor policies, and examines the major debates over public policy, including whether and how it can promote economic prosperity and social justice. (AP)

PSCI/HIST 4740 Seminar in China Studies (3 credits)—The seminar is necessary to allow the student to create a project that will integrate the student's work in the courses of the Minor in China Studies, including the language and study abroad option with its in-country research opportunity. The seminar is multidisciplinary, using the methodologies of History and Political Science.

PSCI 4820 Politics of Development and Change (3 credits)—An examination of various notions of political development, modernization and change, with emphasis on those processes within countries of the Third World. (CP)

PSCI 4900 Independent Study and Research (1-3 credits)—By permission of the department only.

PSCI 4920 Legislative Internship Practicum (1-12 credits)—By permission of the department only.

PSCI 4921 Legislative Internship Research (3 credits)—By permission of the department only. (AP)

PSCI 4940-41 Paralegal Internship (1-3 credits)—By permission of the department only.

PSCI 4950 Senior Seminar (1-3 credits)—Study and research in public policy.

PSCI 4957/5957 Special Topics in Political Science (1-6 credits)

Psychology
PSYC

PSYC 1310 Introduction to Psychology (3 credits)—An introduction to the basic concepts, principles, and theories of the science of psychology. Topics included are biological and developmental processes, perception and awareness, learning and thinking, motivation and emotion, personality and individuality, adjustment and mental health, and social behavior.

PSYC 2000 Social Psychology (3 credits)—*Prerequisite(s): PSYC 1310.* The study of research methodologies, empirical findings, and theoretical concerns in the area of interpersonal behavior.

PSYC 2500 Behavior Analysis: Theory and Practice (3 credits)—*Prerequisite(s): PSYC 1310.* A study of basic and applied topics in learning, particularly as pertaining to the modification of human behavior. Topics will include conditioning, reinforcement, extinction, generalization, discrimination, verbal learning, and modeling.

PSYC 2800 Child Psychological Science (3 credits)—*Prerequisite(s): PSYC 1310.* The course surveys the field of child psychology as a basic science, with a focus on individual differences in children's psychological development. Students interested in the scientific study of children in broader contexts (e.g., schools, families, communities) should consider enrolling in HDAL 2320.

PSYC 2900 Motivation and Emotion (3 credits)—*Prerequisite(s): PSYC 1310.* Beginning with an overview of the historical development of research on motivation and emotion, this course will examine the ethological, physiological, cognitive and social-cultural perspectives on the fundamental question in the field of psychology: Why do individuals behave the way they do?

PSYC 3100 Elementary Statistics (3 credits)—*Prerequisite(s): PSYC 1310 and MATH 1530.* An introduction to descriptive and inferential statistics including measurement, frequency distributions, graphing, percentiles, measures of central tendency and dispersion, normal distribution, correlation, probability, sampling, t-test, and analysis of variance.

PSYC 3200 Principles of Psychological Research (3 credits)—*Prerequisite(s): PSYC 1310 and PSYC 3100, Corequisite: PSYC 3201.* Basic concepts, methodologies, statistical procedures, issues, and elements of scientific writing in psychological research.

PSYC 3201 Principles of Psychological Research Lab (1 credit)—*Prerequisite(s): PSYC 1310 and PSYC 3100, Corequisite: PSYC 3200.* Students conduct psychological research, analyze original data, and complete scientific writing in psychological research.

PSYC 3300 Psychology of Women (3 credits)—*Prerequisite(s): PSYC 1310.* In this course, we will explore and discuss important issues in the field of psychology as it relates to women and gender, apply our discoveries to real world situations, and critically evaluate the research being done in the psychology of women.

PSYC 3330 Applied Psychology (3 credits)—*Prerequisite(s): PSYC 1310.* A survey of the contributions of psychology to areas such as mental and physical health, law, education, industry, and consumer affairs.

PSYC 3340 Introduction to I/O Psychology (3 credits)—*Prerequisite(s): PSYC 1310.* The application of psychological principles to business and industry in areas such as testing, personnel selection, personnel appraisal, leadership, and motivation.

PSYC 3444 Computer Methods in Psychology (3 credits)—*Prerequisite(s): CSCI 1100 and PSYC 3100 (or a comparable course, with the approval of the instructor).* This course introduces students to microcomputer operating system and a statistics software package, such as SPSS or SAS. It provides them with the skills necessary to select and perform basic statistical calculations and enables them to interpret the statistical outputs generated. In addition, students will demonstrate the ability to communicate by way of e-mail and access and download materials from sites on the Internet.

PSYC 3460 The Cognitive Growth of Infants and Children (3 credits)—*Prerequisite(s): PSYC 1310 and either PSYC 2800, HDAL 2320, or ECED 2110.* This is a specialized advanced course focusing on the essential features of cognitive development during the first epochs of human life: babyhood, toddlerhood, preschoolerhood, and childhood. The course is designed to take you on an in-depth journey to the center of the baby's mind, through the vehicle of scientific research, focusing exclusively on the fields of cognitive and language development.

PSYC 3470 The Psychosocial Growth of Infants and Children (3 credits)—*Prerequisite(s): PSYC 1310 and either PSYC 2800, HDAL 2320, or ECED 2110.* This is a specialized advanced course focusing on the essential features of psychosocial development during the first epochs of human life. The course is designed to take you on an in-depth journey to the center of the baby's first psychological relationships with others, and to watch the growth of those relationships over time, through the vehicle of scientific research in the field of psychosocial development.

PSYC 3500 Ecopsychology: The Nature-Human Relationship (3 credits)—*Prerequisite(s): PSYC 1310 or permission of instructor.* The course examines the relationship of humans to nature. It also investigates how the split between Western culture and nature relates to modern psychopathology and environmental destruction.

PSYC 3600 Cognition (3 credits)—*Prerequisite(s): PSYC 1310.* This course is designed to provide an in-depth investigation into the cognitive processes involved in attending, recognizing, remembering, thinking, understanding, and problem-solving. Particular attention is paid to the ingenious techniques created by cognitive psychologists to explore the inner workings of the mind.

PSYC 3700 Health Psychology (3 credits)—*Prerequisite(s): PSYC 1310.* This course will introduce the student to theory and research on the reciprocal relationships between physical health, behavior, and cognitive processes.

PSYC 3707 Behavioral Neuroscience (3 credits)—*Prerequisite: PSYC 1310.* The purpose of this course is to analyze the functions of the primary structures of the human brain, as well as their anatomical locations.

PSYC 3800 Adolescent Psychological Science (3 credits)—*Prerequisite(s): PSYC 1310.* This course surveys the field of adolescent psychology as a basic science, with a focus on individual differences in adolescents' psychological development. Students interested in the scientific study of adolescent development in broader contexts (e.g., schools, families, communities) should consider enrolling in HDAL 2330).

PSYC 3989-99 Internship/Cooperative Education (1-3 credits)

PSYC 4010 History and Systems of Psychology (3 credits)—*Prerequisite: PSYC 1310.* A review of the growth of psychology as a scientific discipline including principal systems, theories, and contemporary development.

PSYC 4017/5017 History and Systems of Psychology (3 credits)—*Prerequisite: PSYC 1310 or equivalent.* A review of the growth of psychology as a scientific discipline including principal systems, theories, and contemporary development.

PSYC 4018 Honors Thesis (3-6 credits)—Open to those in university honor programs only. A capstone experience serving as the culmination of an honors curriculum.

PSYC 4100 An Introduction to the Study of Personality (3 credits)—*Prerequisite: PSYC 1310 or permission of the instructor.* A survey of the psychology of personality. Topics examined include normal and pathological development, personality measurement, current viewpoints

of personality theories, and critical issues within the psychology of personality.

PSYC 4317/5317 Perception (3 credits)—*Prerequisite: PSYC 1310.* A survey of research on vision, color perception, hearing, pattern perception, depth perception, smell, taste, and developmental perception accompanied by slide and video presentations. A brief review of theories of perception is also provided.

PSYC 4320 Abnormal Psychology (3 credits)—*Prerequisite(s): PSYC 1310; Corequisite: PSYC 4321.* A critical review of personality development and disintegration and the concepts underlying diagnosis, therapy, and institutional care.

PSYC 4321 Writing in Abnormal Psychology (1 credit)—*Prerequisite(s): PSYC 1310 or permission of instructor; Corequisite(s): PSYC 4320.* This course serves as the primary means to promote a writing intensive experience within the topical area of abnormal psychology. Must be taken concurrently by all students enrolled in PSYC 4320.

PSYC 4407/5407 Psychopharmacology (3 credits)—*Prerequisite(s): PSYC 1310.* This course is designed to introduce the student to the field of psychopharmacology, placing particular emphasis on drug abuse, drug treatment, and biochemical actions of drugs in the brain.

PSYC 4607/5607 Child Psychopathology (3 credits)—*Prerequisite(s): PSYC 1310.* The purpose of the course is to acquaint students with aspects of diagnosis, measurement, and treatment of child psychopathology.

PSYC 4707-17 Advanced Behavioral Neuroscience (4 credits)—*Prerequisite: PSYC 3707.* A review of the physiological, anatomical, and chemical aspects of the nervous system and their relation to a variety of functions: sensory processes, perception, motivation, learning, emotion, and memory. Four (4) credit credits of lecture and labs per week.

PSYC 4807/5807 Forensic Psychology (3 credits)—*Prerequisite(s): PSYC 1310.* This course is designed to introduce students to issues pertaining to the interface between psychology and law, with an emphasis on issues of current practice and ethical issues in forensic psychology.

PSYC 4817/5817 Introduction to Psychological Testing (3 credits)—*Prerequisite(s): PSYC 1310 and PSYC 3100.*

PSYC 4900 Independent Study in Psychology (1-3 credits)—An independent study of a problem selected in consultation with a member of the psychology faculty.

PSYC 4957/5957 Special Topics in Psychology (1-6 credits)—Permission of the instructor.

PSYC 4989-99 Internship/Cooperative Education (1-3 credits)

Public Health
PUBH

PUBH 1010 Lifetime Behaviors for Healthy Living (3 credits)—Examines physical, mental, and social aspects of health, focusing on topics such as communicable and chronic diseases, sexuality, consumerism, community health, environment, aging, death and dying, and the health care system.

PUBH 1020 Introduction to Public Health (3 credits)—Familiarizes students with the field of public health, including the history and current practices. Major cultural, social, economic, organizational, and environmental factors influencing public health issues and practices at the local, state, national, and international levels will be presented.

PUBH 2030 First Aid and Emergency Care (3 credits)—Prepares the student providing knowledge and skills to handle emergency situations when emergency care is needed and medical assistance is delayed. Cardiopulmonary resuscitation (CPR-BLS) is taught in association with the course. Lab fee applies.

PUBH 2031 Cardiopulmonary Resuscitation (1 credit)—Prepares the student to provide basic life support for respiratory and cardiac emergencies for adults, children, and infants.

PUBH 2100 Health Systems (3 credits)—Studies health systems in the United States and other countries, with emphasis on such management issues as the ability to deliver health-related services, their cost and their operations within a legal framework. Included in the topics are discussions of such major developments as prepaid group practice, managed care, national health insurance, planning for health care and an overview of the issues associated with these developments.

PUBH 2120 School Health Education K-12 (3 credits)—*Prerequisite(s): PUBH 1010.* Studies the school health program: health services, health instruction, and healthful school environment for grades K-12. Emphasis is given to curriculum and various school health issues.

PUBH 2750 Medical Terminology (3 credits)—Designed for public and allied health professionals who need to read and interpret health and medical reports, research reports, or professional literature. Analysis and utilization of medical terms related to various disorders will be made.

PUBH 2950 Disaster Response Training (3 credits)—*Prerequisite(s): Completion of PUBH 2030 or permission of instructor.* This course will introduce students to service-leaning and leadership through the Disaster Response Training program of the American Red Cross. Service projects selected to enhance the classroom components of this course will be required and, if such an event should arise during the course, an opportunity to respond to an actual emergency or disaster will also be included. Students completing this course will be eligible to serve as members of the RESPONSE - ETSU cadre and as American Red Cross Disaster Response Volunteers.

PUBH 3000 Introduction to Biostatistics (3 credits)—Statistical logic and elementary techniques of statistical analysis as applied to health. Collection and interpretation of population, natality, morbidity and mortality statistics. Elementary epidemiology, probability, sampling and tests of significance will be introduced.

PUBH 3010 Accident Prevention (3 credits)—Examines unsafe personal acts and conditions influencing the occurrence of accidents. Emphasis is placed on the prevention of unintentional injuries through reducing human error and modifying unsafe environments.

PUBH 3080 Principles of Epidemiology (3 credits)—*Prerequisite(s): PUBH 3000 or permission of instructor.* Introduces the principles of epidemiology and their application to the investigation, prevention and control of illness, injury and disease.

PUBH 3120 Principles and Practices of Public Health Education I (4 credits)—*Prerequisite(s) or Corequisite(s): PUBH 1010 and PUBH 3000.* Develops skills in the application of principles of learning, community survey and data analysis, theoretical, and applied approaches to program planning, implementation and evaluation, research design, professional development, and ethics.

PUBH 3130 Principles and Methods of Health Education (3 credits)—*Prerequisite(s): PUBH 3120 or permission of instructor.* Develops skills in the design and use of educational methods, materials, and equipment for health education. Develops skills in group work and techniques, motivation, and leadership.

PUBH 3200 Health Services Administration (3 credits)—Reviews and prepares students to understand the components of health care in the United States and the principle delivery systems used in their provision. Organizational theory and design are discussed and evaluated in light of past and present health services systems. Provides an understanding of health care financing and its impact on access to and delivery of health care to different populations.

PUBH 3220 Health Services Planning (3 credits)—Surveys and examines planning, organizing and managing health care in the United States. Attention is given to the evolving health care systems in the United States and abroad and to the function of the administrator in the plan and design of those systems.

PUBH 3500 Consumer Health Education (2 credits)—Provides knowledge and information which will enable one to make intelligent decisions about the purchase and use of health products and services available in society.

PUBH 3600 Quality and Utilization Assurance (3 credits)—Explores the issues related to quality, utilization, and risk management and the administrator's role in developing an environment which supports institutionalization of these concepts.

PUBH 3950 Principles of Public Health Research (3 credits)—Overviews research techniques and methods emphasized in public health. Issues to be discussed include the steps, components, funding sources, proposal guidelines and general format of research reports for journals.

PUBH 4007/5007 Principles and Practices of Patient Education (3 credits)—Develops skills in the design and use of educational methods, materials, and counseling to provide specialized education for the patient in the clinical environment.

PUBH 4030 Community Health (3 credits)—*Prerequisite(s): PUBH 1010 or ENVH 1800; or permission of instructor.* Studies and analyzes community health problems and their causes. Explores the organization, administration, and work of agencies involved with community health, with emphasis on the professional's responsibility for the assessment, delivery, and evaluation of health information and services in the community.

PUBH 4060 Community Organization for Health Education Programs (3 credits)—*Prerequisite(s): PUBH 4030 or permission of instructor.* Considers the principles and practices of community organization for health education and the role of the health educator in the community. Motivation of lay and professional individuals and groups to develop and implement community plans is studied.

PUBH 4220 Family Health and Human Sexuality (2 credits)—Familiarizes students with health problems and solutions encountered by the family and individuals at various stages of the life cycle. Explores the components of human sexuality as they relate to physical, mental, and social well-being.

PUBH 4357/5357 Thanatology (3 credits)—This course explores death, dying, and bereavement and is focused on enhancing personal and health professional roles related to the experience of death and dying. Course topics address the medical, legal, social, cultural, and religious view of death in America and other cultures. Through this process, students are able to: a) recognize and deal with emotions and behaviors related to the experience of death and dying; b) better understand and accept death as a natural process of life, and; c) be better prepared to help others deal effectively with death and dying.

PUBH/SPCH 4377/5377 Health Communication (3 credits)—*Prerequisite(s): Permission of the instructor.* A study of the interpersonal, group, organizational, and public communication processes that shape beliefs, decisions and behavior regarding health, sickness, and health care. The course examines attitudes and actions of various participants in health communication, including citizens, health professionals, and those engaged in the public debate of health issues. Students cannot receive credit for both SPCH 4377 and PUBH 4377.

PUBH 4457/5457 Emerging Technologies for the Health Professions (3 credits)—Prepares health professionals for the ever changing technological workplace demands. Fuses new technologies with practical applications. Students are taught skills to present and manipulate information in the electronic age and reduce repeated task/events into time-saving solutions. Health education and training strategies are combined with emerging digital tools to develop training components.

PUBH 4500 Pathophysiology of Disease (3 credits)—A discussion of common diseases with respect to etiologic agents, physiology, pathological, and emotional changes, management by chemical and physical agents, psychotherapy, and patient education.

PUBH 4607/5607 Gerontology and Health (3 credits)—Comprehensively examines the aging process, familiarizing students with physical, psychological, social, and economic changes. Course emphasizes assessment of needs in various areas relating to the aged.

PUBH 4707/5707 International Health: An Overview of Problems and Issues (3 credits)—Designed to provide a fuller understanding of the patterns of medical care delivery and public health practices and the factors that inhibit or enable their applications among community groups and organizations around the world.

PUBH 4850 Field Experience (12 credits)—Prerequisite(s): Permission of department. Work experience in hospitals, official, and voluntary agencies, and other community groups and organizations. The student furnishes necessary living and traveling expenses. One credit hour equivalent to 45 contact hours.

PUBH 4907/5907 Independent Study in Public Health (1-3 credits)—Designed for students desiring an in-depth study of health problems in a special area of need or interest.

PUBH 4927/5927 Cultural Competence and Spirituality in Health Care (3 credits)—Health care effectiveness increases when the spiritual and cultural traditions of the patient are addressed. In this class, students will receive an orientation to the practices and concerns of diverse cultural and religious groups.

PUBH 4937/5937 Stress Management (3 credits)—Acquaints the student with the literature and research on stress and provides a holistic introduction into the theory and practice of stress management that encompasses physical, emotional, psychological, and spiritual dimensions of stress responses. The course uses an experiential approach to applying coping strategies and relaxation techniques covered in class by requiring students to develop and implement a personal stress management project.

PUBH 4957/5957 Topics in Public Health (1-6 credits)—Surveys new development in health education, following a structured approach or the intensive study of a selected topic utilizing the workshop approach.

PUBH 4989 Internship/Cooperative Education (1-3 credits) — Credit for work in the health care sector. Must obtain academic advisor's approval prior to enrolling.

Public Relations
PUBR

PUBR 2700 Introduction to Public Relations (3 credits)—Study of fundamental principles and techniques applicable in the field of public relations Information is provided on various types of career opportunities.

PUBR 2770 Writing for Public Relations (3 credits)—*Prerequisite(s): JOUR 3150.* Instruction in fundamentals of reporting, feature writing, broadcast news writing, and specialized writing done regularly by public relations practitioners. Assignments include work for public relations professionals.

PUBR 3770 Public Relations Publications (3 credits)—Fundamentals of typography, printing, and computer design applied to the production of publications and web sites common in the public relations field.

PUBR 4080 Public Relations Internship (3 credits)—*Prerequisite(s): Permission of instructor.* Supervised professional experience in public relations.

PUBR 4301 Topics in Public Relations (1-6 credits)

PUBR 4730 Public Relations Practices (3 credits)—*Prerequisite(s): PUBR 2700, PUBR 2770, PUBR 3770, RTVF 3602.* Application of public relations principles and techniques to business and industry, government, health care facilities, institutions and organizations, trades and professions. Emphasis on case studies and projects completed for on- and off-campus groups and organizations.

PUBR 4900/5900 Independent Studies in Public Relations (1-3 credits)

Radiologic Technology
RADT

RADT 3000 Image Production and Evaluation (4 credits)—*Prerequisite(s): Program admission; Corequisite(s): RADT 3020, RADT 3021, and RADT 3040.* This course presents an in-depth discussion of image formation to include photographic and geometric factors. Discussion includes prime factor manipulatives, calculations, and derivatives, latent/manifest image formation, radiographic interactions, and pathological considerations. All factors concerning image production will be interrelated. Extensive correlation, practical/laboratory applications, and written assignments are required.

RADT 3005 Foundations in Radiologic Technology (3 credits)—*Prerequisite(s): Program admission; Corequisite(s): RADT 3000, RADT 3020, RADT 3021, RADT 3040*. Familiarizes the student with medical terminology, career opportunities, professional organizations, administration, equipment, biology and protection, human diversity, patient interactions, transfer techniques, immobilization techniques, vital signs, aseptic techniques, professional ethics, and medical law as they relate to radiologic technology.

RADT 3010 Radiographic Equipment (4 credits)—*Prerequisite(s): RADT 3000; Corequisite(s): RADT 3060, RADT 3030, RADT 3031, and RADT 3040*. An in-depth discussion of atomic theory, magnetism and electromagnetism, electrostatics, electrodynamics, radiation production and interaction, and energy transformation will occur. Radiographic tube construction, operation, and electronic schematics will be presented and interrelated with the associated medical utilization and characteristics.

RADT 3020 Radiographic Procedures I (3 credits)—*Prerequisite(s): Program admission; Corequisite(s): RADT 3021*. An in-depth discussion of radiographic procedures including the thoracic-abdominal areas and the appendicular skeleton. Anatomy, patient care, and terminology are correlated with radiographic procedures. Appropriate methodologies regarding patient identification, clinical profiles, nomenclature, universal precautions, and radiographic critique/quality are presented. An accompanying laboratory experience analyzing radiographic evaluation and techniques will occur.

RADT 3021 Radiography Procedures I Lab (1 credit)—*Prerequisite(s): Program admission; Corequisite(s): RADT 3020*. Under direct supervision, the student will observe, demonstrate, and produce diagnostic, quality radiographs of the thoracic-abdominal cavities, and the upper/lower extremities.

RADT 3030 Radiographic Procedures II (3 credits)—*Prerequisite(s): RADT 3020; Corequisite(s): RADT 3031*. This course is a continuation and integration of RADT 3020 and RADT 3021 that also includes an in-depth discussion of procedures of the axial skeleton, the digestive, neural, respiratory, biliary, and genitourinary body systems. Anatomy (inclusive of cross-sectional), patient care, pathology, and medical terminology will be correlated with procedures. An accompanying laboratory component will occur.

RADT 3031 Radiographic Procedures II Lab (1 credit)—*Prerequisite(s): RADT 3021; Corequisite(s): RADT 3030*. Under direct supervision, the student will observe, demonstrate, and produce diagnostic, quality radiographs of the axial skeleton, the digestive, neural, respiratory, biliary, and genitourinary body systems. Anatomy (inclusive of cross-sectional), patient care, pathology, and medical terminology will be correlated with procedures presented in RADT 3030.

RADT 3040 Clinical Education I (2 credits)—*Prerequisite(s): Program admission*. This competency-based clinical experience will introduce the radiography student to learning opportunities in ancillary areas and current imaging technologies available at clinical agencies. Student participation in patient assessment and care, and observing and performing medical imaging procedures as presented in RADT 3020/21 under direct supervision will occur. Students will demonstrate cognitive, affective, and psychomotor skills with a focus on outcomes assessment.

RADT 3050 Clinical Education II (2 credits)—*Prerequisite(s): RADT 3040; Corequisite(s): RADT 3030 and RADT 3031*. A competency-based clinical experience that intensifies the cognitive, affective, and psychomotor skill level of students in the performance of imaging procedures of the axial and appendicular skeleton. Students continue to focus on outcomes assessment and to master procedures from RADT 3040.

RADT 3060 Radiographic Imaging and Quality Assessment (3 credits)—*Prerequisite(s): RADT 3000*. A course which discusses the history and role of computers in modern imaging systems including: picture archiving and communication systems, digital imaging, digital fluoroscopy, computerized tomography, magnetic resonance imaging, sonography, nuclear medicine, mammography, and radiation oncology. Quality assessment will be presented and integrated with imaging systems and modalities. Students will present written and oral reports with an emphasis on the written portion.

RADT 3070 Radiation Biology and Protection (4 credits)—*Prerequisite(s): RADT 3010*. This course includes an in-depth discussion of the study of human cells, organs, systems, and human tissue as a result of exposure to various radiation sources. Methods of radiation safety, monitoring, and protection will be discussed. Students are required to orally present an associated topic to class and faculty.

RADT 4000 Clinical Education III (6 credits)—*Prerequisite(s): RADT 3050*. A competency-based clinical practicum that requires higher cognitive, affective, and psychomotor skill levels. This clinical experience provides learning opportunities in fluoroscopy of the physiological body systems, cystography, advanced extremity, mobile, trauma, and surgical radiographic procedures. Mastery of knowledge from previous clinical practicums with a focus on outcomes assessment will occur. All classes occur at the clinical agencies.

RADT 4010 Clinical Education IV (3 credits)—*Prerequisite(s): RADT 4000*. This clinical experience will occur at a different clinical agency thereby diversifying the clinical applications of cognitive, affective, and psychomotor skills. Students will participate in diagnostic imaging, specialty areas, and interventional radiography to become a true part of the health care team. Students will complete minor, major, and graduate competencies (advanced radiographic/fluoroscopic procedures) emphasizing outcomes assessment.

RADT 4020 Clinical Education V (3 credits)—*Prerequisite(s): RADT 4010*. The clinical experience consists of assignments in general radiography/fluoroscopy and specialty areas (oncology, magnetic resonance imaging, and cardiac catherization). Students will demonstrate the highest level of cognitive, affective, and psychomotor skills to complete graduate competencies, outcomes assessment, and program requirements. Practicing professionals clinical phase is specifically designed to facilitate growth and lifelong learning.

RADT 4030 Radiographic Pathology (3 credits)—*Prerequisite: RADT 4040*. This course includes an in-depth discussion and radiographic correlation of disease processes. Disease etiology, processes, nature, causes of disease and injury, treatment, and their related radiographic significance will be discussed. Students will present case studies.

RADT 4040 Radiopharmaceuticals and Special Procedures (3 credits)—*Prerequisite: RADT 3030*. Advanced radiographic procedures encompassing interventional, vascular, neuroradiologic radiography, and specialized equipment/procedures are discussed. Invasive techniques, contrast media pharmacology, and related imaging modality integration are presented.

RADT 4060 Digital Imaging (3 credits)—*Prerequisite(s): RADT 3000, RADT 3010 and RADT 3060; Corequisite(s): RADT 4020*. The course includes an introduction to the past, present, and future of digital imaging in radiology. The components of DICOM & PACS, the effects that digital imaging have impressed on the medical field, as well as, problem solving interventions will be discussed.

RADT 4070 Professional Transition to Radiography (3 credits)—*Prerequisite(s): RADT 3070; Corequisite(s): RADT 4020, RADT 4030, and RADT 4060*. This is a capstone course for the students enrolled in the radiography program. It provides the student with a venue to synthesize knowledge and skills learned during the course of the program. In addition, it prepares the graduate to enter the profession of radiology.

Reading

READ

See Developmental Studies for below college-level courses.

READ 3000 Current Issues in Literacy (1 credit)—This course explores international, national, and regional sociopolitical issues in literacy to meet the standards required of the Interdisciplinary Studies in Education major. This course examines, analyzes, and discusses current controversies in the teaching of literacy. Critical thinking, problem solving, and close textural analysis of readings in professional literature will be emphasized. Development of a professional voice in the discipline of literacy and

literacy education will be encouraged through composition and oral presentations.

READ 3100 Early Literacy (3 credits)—The activities and study in this course focus on the research-oriented theoretical knowledge base concerning early language development. Emphasis is placed on both socio-environmental, physical growth and development, and academic forces contributing to early language and reading achievement.

READ 3200 Expanding Literacy (3 credits)—*Prerequisite(s): Admission to teacher education; Completion of READ 3000 and READ 3100.* Study of theories relating to enhancement of literacy competencies for established readers. Theoretical models studied include content area reading, general reading for development, reading motivation, and recreational reading. A field-based assignment (10 hours) required.

READ 4026 Assessment and Enhancement of Literacy (3 credits)—*Prerequisite(s): READ 3000, READ 3100, and READ 3200. Corequisite(s): CUAI 4210, CUAI 4220, CUAI 4310, and CUAI 4241.* Study of theoretical foundations for the assessment of reading proficiency and models for building reading competencies. Targets for study include evidence-based components of reading processes.

READ 4027/5027 Diagnostic and Remedial Procedures in Reading (3 credits)—Emphasis on case study procedure. direct contact with children in diagnostic situations. formal and informal procedures for diagnosing reading skills, abilities, aptitudes, and methods and materials for the correction or improvement of diagnosed reading difficulties. Students desiring graduate credit will have requirements beyond normal course expectations.

READ 4146 Storytelling and Literacy (3 credits)—Study of storytelling and narrative as essential modes of expression, communication, and learning. The course focuses on developing oral delivery skills and applying storytelling to stimulate imagination and create lifelong learners.

READ 4437/5437 Reading Instruction in Middle and Secondary Schools (3 credits)—*Prerequisite(s): Admission to teacher education.* This course addresses reading strategies needed for various content areas. developmental, corrective, and remedial practices and procedures at the middle and secondary levels. and the role of language in learning subject matter content. Students desiring graduate credit will have requirements beyond normal course expectations.

READ 4626 Materials for Children's Literacy (3 credits)—*Prerequisite(s): Admission to Teacher Education.* A study of children's literacy materials with emphasis on quality children's literature, including multicultural literature. Involves reading and evaluating literature of various genres, as well as children's periodicals and software.

READ 4900 Independent Study in Reading (1-3 credits)—By approval from the program coordinator.

READ 4957/5957 Topics in Reading (1-6 credits)—*Prerequisite(s): Dependent on subject matter.* Selected topics of current interest in reading. Offered upon sufficient demand for specific subject matter. May be repeated for different topics. Consultation with the instructor is recommended before enrollment.

Religious Studies
RELI

RELI 2210 Introduction to the Study of Religion (3 credits)—A comparative and historical introduction to the world's ways of being religious. (fall, spring, summer)

RELI 3220 Western Religions (3 credits)—*Prerequisite(s): RELI 2210, or permission of the instructor.* A study of the religious life of the West, from preliterate societies and classical civilizations of the past through contemporary Judaism, Christianity, and Islam. (spring, odd years)

RELI 3230 Eastern Religions (3 credits)—A study of religions whose origins were in the East: Hinduism, Buddhism, Confucianism, Taoism, and Zen. (spring, even years)

RELI 3240 Hebrew Scriptures (3 credits)—*Prerequisite(s): RELI 2210, or permission of the instructor.* A historical and literary survey of the Hebrew Bible. (fall, odd years)

RELI 3250 Greek Scriptures (3 credits)—*Prerequisite(s): RELI 2210, or permission of the instructor.* A historical and literary survey of the Greek/Christian Scriptures. (spring, even years)

RELI 3261-63 Religion Colloquium (1-3 credits)—*Prerequisite(s): RELI 2210 or permission of the instructor.* Some issue, movement, or person of importance to the study of religion will be selected for the topic. Course may be repeated to a maximum of nine (9) credit hours. (3263 – fall, odd years)

RELI 4220 Contemporary Religious Thought (3 credits)—*Prerequisite(s): At least one (1) RELI course at the 3000 level; or permission of the instructor.* A survey of developments in religious thought from the mid 19th century to the present.

RELI 4920 Independent Studies in Religion (1-3 credits)—*Prerequisite(s): At least one (1) RELI course at the 3000 level or permission of the instructor.* (fall, spring)

Radio/Television/Film
RTVF

RTVF 2600 Survey of Broadcasting (3 credits)—The study of the development of the broadcast/cable/teleproduction industry and its present structure, new technologies, FCC, and other regulatory agencies, station, network, cable, and teleproduction operations and their effect on society.

RTVF 2604 Radio/TV Laboratory (1 credit)—*Prerequisite(s): RTVF 2630, RTVF 3602, RTVF 3640, RTVF 3651, RTVF 3661, and permission of instructor.* Instruction and practical experience in producing the radio and television segment. A complete product from concept to "aired" segment is required in radio or television. May be repeated. Credit may also be earned in RTVF 4604.

RTVF 2630 Writing for Radio/TV (3 credits)—*Prerequisite(s): RTVF 2600 or permission of instructor.* Techniques of writing radio/television copy including commercials, announcements, program continuities, and dramatic scripts.

RTVF 3600 Radio/TV News (3 credits)—*Prerequisite(s): RTVF 2600 or permission of instructor.* A study of the organization and function of broadcast news with training in reporting, writing, and editing news for various formats and program types.

RTVF 3602 Video-Film Techniques (3 credits)—*Prerequisite(s): RTVF 2600 or permission of instructor.* Theory and technique of commercial, ENG and EFP video, and digital technology. Course provides practical experience with all types of hardware and software.

RTVF 3640 Broadcast Performance (3 credits)—*Prerequisite(s): RTVF 2600 or permission of instructor.* The study and development of communication principles and skills for the announcer and actor with specific theory and training in the techniques, methods, and procedures that relate to broadcast performance.

RTVF 3651 Radio Production (3 credits)—*Prerequisite(s): RTVF 2600 or permission of instructor.* Principles and methods of producing and directing representative types of radio programs in lecture and lab sessions.

RTVF 3661 Television Production (3 credits)—*Prerequisite(s): RTVF 2600 or permission of instructor.* Principles and methods of producing and directing representative types of television programs in lecture and lab sessions.

RTVF 3671 Broadcast Programming (3 credits)—P*rerequisite(s): RTVF 2600 or permission of instructor.* The planning of radio and television programs and formats. Design of specific programs to effectively reach a desired audience. Includes analysis and redesign of programs already on the air. Available in odd-numbered years.

RTVF 4080 Broadcasting Internship (3 credits)—*Prerequisite(s): Permission of instructor.* Paid professional experience in broadcasting.

RTVF 4401 Topics in Broadcasting (1-6 credits)

RTVF 4600 Radio/TV Reporting and Editing (3 credits)—*Prerequisite(s): RTVF 2600, RTVF 3600, and RTVF 3602; or permission of instructor.* Experience in preparing radio and television newscasts for presentation. Synthesis of reporting, writing, audio, and film coverage of

national, regional, and local news. Practical experience gained by presentation over radio and television.

RTVF 4604 Radio/TV Laboratory (1 credit)—*Prerequisite(s): RTVF 2630, RTVF 3602, RTVF 3640, RTVF 3651, RTVF 3661, and permission of instructor.* Instruction and practical experience in producing the radio and television segment. A complete product from concept to "aired" segment is required in radio and television. May be repeated. Credit may also be earned in RTVF 2604.

RTVF 4651 Advanced Radio Production (3 credits)—*Prerequisite(s): RTVF 3651 or permission of instructor.* A study of production methods with an emphasis on laboratory training in producing and directing special projects and complete radio programs.

RTVF 4661 Advanced TV Production (3 credits)—*Prerequisite(s): RTVF 3602 or permission of instructor.* A study of production methods with an emphasis on laboratory training in producing and directing special projects and complete television programs.

RTVF 4680 Broadcast Production Practicum (2 credits)—*Prerequisite(s): RTVF 2630, RTVF 3602, RTVF 3640, RTVF 3651, RTVF 3661 and permission of instructor.* Instruction and practical experience in producing the radio and television programs. A complete product from concept to "aired" program is required in radio and television.

RTVF 4690 Broadcast Management (3 credits)—*Prerequisite(s): RTVF 2600 and MCOM 4037; or permission of instructor.* A study of the elements basic to successful operation of a radio, television, cable, and teleproduction facility. The study of advertising, budgeting, public relations, promotion, staffing, and federal and industry-wide regulatory codes.

RTVF 4900 Independent Studies in Broadcasting (1-3 credits)

Sport and Leisure Management
SALM

SALM 3100 Introduction to Leisure Services (3 credits)—An overview of the history and professional developments in leisure services. Broad treatment is given to the types and functions of leisure services in a modern world.

SALM 3105 Programming and Leadership in Leisure Services (3 credits)—This course is designed to introduce the student to program and leadership skills used in leisure services. Emphasis will be on leadership techniques, group dynamics, communication skills, and program development for various leisure services.

SALM 3110 Interpretation of Cultural and Natural Resources (3 credits)—This course will focus on the study and practice of interpretative techniques of cultural and natural resources. Emphasis will be placed on the development of skills in designing, producing, and presenting interpretative materials and programs in a recreational setting to all segments of the population. This course will also provide a service-learning project that will involve interaction with a leisure service organization that incorporates interpretation into its activity program.

SALM 3115 Wilderness First Responder (3 credits)—This course will focus on the preparation of outdoor leaders to respond to medical emergencies in remote locations. Emphasis will be placed on prevention of medical emergencies and decision-making when emergencies occur. Also covered will be extended care and prolonged transport and improvised equipment. Additional course cost will be involved to cover the cost of supplies, certification, and instructor.

SALM 3117 Recreation for Special Populations (3 credits)—This course is an introduction to the area of therapeutic recreation and providing recreational services to special populations. Components of this course will include background information on the development of therapeutic recreation, environmental barriers, and recreation opportunities, characteristics of selected populations, and program planning considerations for special populations. This course will include a service-learning component and require field trips to agencies providing therapeutic recreation services.

SALM 3120 Outdoor Recreation Skills (3 credits)—This course was designed to develop outdoor leadership and basic outdoor recreational skills in a variety of outdoor activities. In addition to the regular on-campus classes, students will be required to participate in several weekend field trips during which time they will demonstrate practical application of the skills and knowledge acquired. Activities covered in this course will include camping and campcrafts, outdoor cookery, hiking and backpacking, map and compass use, canoeing, and rock climbing.

SALM 3125 Camp Leadership (3 credits)—A study of organized camping with emphasis on leadership, programming, and camp administration. This course will follow the American Camping Association course content for the Basic Camp Director program.

SALM 3130 Natural Resource Management (3 credits)—This course will focus on the administration of recreational lands by state and federal agencies with emphasis on management policies and procedures. This course will include service-learning experiences involving travel to and volunteer work with federal and state land management agencies.

SALM 3150 Regional Outdoor Leadership and Service (3 credits)—This course has been designed to support the ETSU outdoor initiative cohort. It is a service-learning course and will involve travel to and work in selected areas of the southeastern region of the United States. Emphasis during this course will be on developing an increased understanding of the areas visited and the impact of management policies on the environment and recreational opportunities. Students will be actively involved in planning and leading all field trips. Opportunities will be available for refinement of outdoor living and leadership skills in an outdoor environment. This course will involve extensive tent camping and travel by van as part of a group experience.

SALM 3200 Introduction to Sport Management (3 credits)—This course introduces students to the meaning of sport management in terms of its scope, foundations, issues, and future trends. Emphasis will be a variety of sports or sport-related organizations. Various career opportunities available in the field of sport management will also be discussed.

SALM 3210, 3211 Practicum in Sport and Leisure Management I, II (1 credit each)—This class will afford the student the opportunity to perform management duties under the supervision of a sports or leisure services manager. The assignment will be part time (up to 8 hours, maximum, per week and a maximum of 48 total hours per semester) and be performed either on campus or in close proximity to campus.

SALM 3220 Facility Planning and Event Management (3 credits)—A study of content concerning the planning of facilities to accommodate sport and fitness activities. Students will learn procedures to effectively conduct sporting events.

SALM 3225 Marketing Strategies and Public Relations in SALM (3 credits)—This course is designed to provide students with a practical application of marketing science and public relations as they relate to all realms of the sport industry-professional sports intercollegiate, interscholastic, and intramural sport. amateur sports, and all elements of commercial clubs, resorts, camps, and service organizations.

SALM 3230 Sport in the Social Context (3 credits)—An introductory course devoted to an examination of sport and its relationship to society and to other social institutions. Principal emphasis is given to sport in American society.

SALM 4100 Professional Field Experience in Leisure Services (3 credits)—Provides the student with the opportunity to be actively involved in a leisure service delivery system. Includes the application of theoretical knowledge to practical situations. The student will be required to complete a minimum of 120 hours of documented field experience during the semester.

SALM 4105 Commercial Recreation and Tourism (3 credits)—This course is designed to introduce students to the scope, characteristics, and management aspects of the diverse commercial recreation and tourism industry.

SALM 4107 Alpine Tower Leadership (3 credits)—This course utilizes the Alpine Tower Complex as a unique educational modality for developing teamwork, trust, cooperation, communication, and respect for others in a problem-solving environment. In addition, students will also

develop leadership skills necessary to facilitate the personal growth of others through educational experiences using the Alpine Tower Complex Emphasis will also be given to the day-to-day management, operation, and maintenance of the Alpine Tower Complex and similar ropes course operations. This course will include service-learning experiences involving group leadership on the Alpine Tower Complex.

SALM 4117, 4118, 4119 Outdoor Leadership (3 credits each)—This course is based on the student contract format and will provide students an opportunity to complete a course of study involving specialized outdoor leadership development with outdoor leadership organizations such as the National Outdoor Leadership School (NOLS), Outward Bound (OB), and Wilderness Education Association (WEA). The course will be a minimum of three (3) weeks in length including pre-field experience assignments, field experience with a specific outdoor leadership organization, and post-field experience project completion and assessments. Specific course requirements will be established on an individual basis and the course grade assigned according to the established contract.

SALM 4127 Rocky Mountain Experience (3 credits)—This is a service-learning course that involves extensive travel and work in selected national parks in the Rocky Mountain region. During the course students will develop outdoor living skills, leadership skills in an outdoor environment, skills relative to trail and campsite construction and basic park maintenance, knowledge of the flora, fauna, and geological features of national parks visited, and knowledge of the impact of governmental policies on the management and operation of national parks. This course will involve extensive tent camping and travel by van as part of a group experience.

SALM 4137 Wilderness Education Association Stewardship Program (3 credits)—Based on the Wilderness Education Association (WEA) 18 point curriculum, this course is a field-based experience designed to develop principles of wilderness ethics, land stewardship, effective group dynamics, and technical travel skills sufficient to move a group through the wilderness safely, enjoyably, and with a minimum of environmental and social impact.

SALM 4157 Outdoor Education (3 credits) — This course is designed for individuals interested in using the outdoors as a learning setting. Emphasis will be placed on creating a learning environment in the outdoors as well as teaching methods and delivery, lesson plan design, leadership techniques, field trip planning, and risk management. Aspects of this course will also focus on development of outdoor activity skills. This course will involve tent camping and travel by van as part of a group experience.

SALM 4167 Expedition Leadership (3 credits) — *Prerequisite: SALM 3120 or permission of instructor.* This course is designed to provide individuals interested in leading groups on extended outdoor experiences with essential information relative to expedition success. Emphasis will be placed on leader judgments, creation of expedition outcomes, leadership styles, creating positive group environment, group processing, decision-making and consensus building, expedition behavior, logistics and trip planning, and risk management. A review of basic outdoor living skills will also be part of this course. This course will involve extended field experiences and travel by van.

SALM 4205 Issues and Trends in Sport Management (3 credits)—The purpose of this course will be to identify and analyze current factors affecting the field of Sport Management. The primary thrust of the course will be directed toward the modern day duties and responsibilities of a sports manager. Current trends in the Sport Management field will be researched and discussed. Specific course content will vary with the evolution of the field of Sport Management.

SALM 4210 Legal Issues and Risk Management in Sport and Leisure Activities (3 credits)—This course is intended to aid sports medicine personnel and sport and leisure service leaders in understanding the major legal concepts affecting the practices and procedures followed in their professions, and in initiating an active program of risk and liability management that will help ensure the safety of participants in these programs This course has been identified as writing- and oral-intensive.

SALM 4215 Social Psychology of Sport and Leisure (3 credits)—An introduction to the psychological and sociological behavioral dimensions that underlie participation in exercises, fitness, recreational, and competitive sport activities.

SALM 4225 Management of Sport and Leisure Activities (3 credits)—To provide the student with knowledge of sport management in both athletics and leisure sport including management theories, roles and responsibilities.

SALM 4230 Fund-Raising in Sports (3 credits)—This course is designed to provide students with the knowledge to seek out resources from a wide range of possible sources and to use marketing and promotions skills to employ resources to yield optimum benefits.

SALM 4250 Internship in Sport and Leisure Management (12 credits)—This class will give the student the opportunity to put theory into practice. Students will work in a sport or leisure management agency for forty hours per week (minimum of 480 clock hours per semester) for an entire semester. Students will be consulted as to the sport or leisure management agency desired for the internship experience.

Science Education

SCED

SCED 4020 Wildlife Conservation (3 credits)—*Prerequisite(s): Completion of eight credit hours of science.* Relationships of wild animals to the physical environment and to other organisms, including humans, with emphasis on man's attempts to restore and maintain habitats.

SCED 4321 Exploring and Discovery in Science (4 credits)—*Prerequisite(s): Admission to Teacher Education.* Completion of eight (8) credit hours of science from general education core. Completion of SCED 4020 Wildlife Conservation. This course provides a comprehensive integrated science content perspective in the areas of physical, life, earth, and space science. A laboratory component involving inquiry-based research will expand on the course content of conceptual understanding, content, skills, and dispositions in science including understanding of the nature of science.

SCED 4417/5417 Teaching Science in Secondary Schools (3 credits)—*Prerequisite(s): Twelve credits of science and upper-division standing.* Methods of teaching science in junior and senior high. Emphasis on classroom and laboratory techniques, demonstrations, selections of material, and visual aids.

SCED 4527/5527 Science Methods for Early Childhood (3 credits)—*Prerequisite(s): Admission to Teacher Education and successful completion of all undergraduate science classes; Corequisite(s): This course is to be taken with CUAI 4517/5517 and 4537/5537.* This course provides a PreK-4 science education perspective. Science teaching methodology, content, skills, and dispositions are examined with an emphasis on integration with mathematics and other appropriate subject areas. Learning needs of culture, gender, and special populations are explored. Students will be required to participate in field experience in PreK-4 settings.

SCED 4904 Independent Study in Science Education (1-6 credits)

SCED 4957/5957 Topics in Science Education (1-6 credits)—*Prerequisite(s): Dependent on subject matter.* Selected topics of current interest in science education. Offered upon sufficient demand for specific subject matter. May be repeated for different topics. Consultation with the instructor is recommended before enrollment.

Sociology and Anthropology

SOAA

SOAA 3050 Appalachian Culture (3 credits)—*Prerequisite(s): ANTH 1240, SOCI 1020 or APST 2060.* This course explores varied aspects of Appalachian culture to consider issues of regional identity and culture change. Topics may include, for example, coal-mining, folk and faith healing, kinship and community, media and legend, folk art, and social protest.

SOAA 3350 Social Statistics (3 credits)—*Prerequisite(s): MATH 1530.* An introduction to applied statistics in the field of sociology and related disciplines

SOAA 3700 Peoples and Cultures of Latin America (3 credits)—An introduction to various cultures and nations in Latin America. Topics include indigenous cultures, cultural variation, economic development, political change and demographic processes.

SOAA 3800 Religion, Society, and Culture (3 credits)—*Prerequisite(s): SOCI 1020, ANTH 1240, or permission of instructor.* Analysis of the social and cultural dimensions of religion and the origins, functions, and place of religion in human societies.

SOAA 4357/5357 Popular and Consumer Culture (3 credits)—An examination of the impact of media and consumer cultures upon traditional lifestyles and world views.

SOAA 4410 International Field Experience (2-6 credits)—*Prerequisite: ANTH 4400 or SOAA 4627.* This course provides upper-level Anthropology/Sociology majors or minors an international field experience to apply skills and techniques learned in their ETSU coursework. Students may participate in a diversity of projects, including archaeological excavations and ethnographic fieldwork. The course is repeatable up to and including 6 hours.

SOAA 4627/5627 Ethnographic Field Work Techniques (3 credits)—*Prerequisite(s): ANTH 1240 or SOCI 1020.* An introduction to the information-gathering techniques and strategies employed by modern anthropologists, folklorists, and qualitative sociologists-—including interviewing, recording, photography, transcription, and data analysis. Practical applications and cultural situations are also stressed.

SOAA/APST 4907/5907 Foodways of Appalachia (3 credits)—Traditional and developing food cultures of the Mountain South. Topics include: the historical roots of Appalachian cookery; food and class in Appalachia; Native American and African influences on mountain cuisine; immigrant cooking in the mountains; the rituals of the mountain table; the products of the land and larder; traditional food preservation techniques and beliefs; and the emergence and viability of sustainable agriculture and aquaculture.

SOAA 4957/5957 Special Topics in Sociology/Anthropology (1-6 credits)

Sociology
SOCI

SOCI 1020 Introduction to Sociology (3 credits)—Sociology is the systematic study of social behavior. Topics include interaction, culture, inequality and social class, the changing society, socialization, subcultures, crime and deviance, family and religion, among others.

SOCI 2000 Marriage and the Family (3 credits)—An overview of the effects of societal change on marital and nonmarital relationships. Topics include premarital dynamics, singles, dual career families, family violence, and divorce.

SOCI 2020 Social Problems (3 credits)—P*rerequisite(s): SOCI 1020.* Sociological study of major current problems confronted in American society and the beliefs that compound them.

SOCI 3030 Gender and Society (3 credits)—*Prerequisite(s): SOCI 1020 or permission of instructor.* Study of the social construction of gender and its consequences for individuals and society. Examination of our cultural assumptions about gender identities, roles, behaviors, and the social processes that reproduce gender inequality. (spring)

SOCI 3060 Medical Sociology (3 credits)—Study of the concepts, theories, and methods of medical sociology with particular emphasis on the analysis and application of the findings of contemporary research in medical sociology.

SOCI 3110 Minorities (3 credits)—*Prerequisite(s): SOCI 1020.* Examination of the relationships between dominant and subordinate racial, ethnic, and other groups in the U.S., the theoretical perspectives, the processes that create or maintain institutional discrimination, and current issues concerning intergroup relations.

SOCI 3150 Urbanization (3 credits)—*Prerequisite(s): SOCI 1020.* Processes of urbanization and the urban impact on rural life, the structure of the metropolis, segregation, slums, suburbs, mobility, disorganization, and cultural change.

SOCI 3210 Sociological Research (3 credits)—Methods used in investigating and reporting social phenomena.

SOCI 3300 Deviant Behavior (3 credits)—*Prerequisite(s): SOCI 1020.* An analysis of various types of deviance in society with an emphasis on the application of various theories. Topics include drug addiction, prostitution, mental illness, disability, sexual deviance, alcoholism, and domestic violence.

SOCI/CJCR 3310 Criminology (3 credits)—*Prerequisite(s): SOCI 1020.* An analysis of the major sociological theories of crime causation, sociological aspects of types of offenders, and techniques of measuring crime. This course is cross-listed with CJCR 3310 and counts in the Criminal Justice major, but it is not a writing-intensive course.

SOCI 3320 Juvenile Delinquency (3 credits)—*Prerequisite(s): SOCI 1020.* A study of the extent, causes, treatment, and prevention of delinquency.

SOCI 3444 Data Analysis (3 credits)—*Prerequisite(s): MATH 1530 and CSCI 1100.* Instruction on the use of SPSS and/or other software packages for analyzing social science data via statistics with an emphasis on interpretation and application.

SOCI 4018 Honors Thesis (3 - 6 credits)—Open to those in university honor programs only. A capstone experience serving as the culmination of an honors curriculum.

SOCI 4057/5057 Community Sociology (3 credits)—*Prerequisite(s): SOCI 3210, CJCR 2000, or PSYC 3201.* An examination of the issues and concepts of community and the principles of community-based research using theoretical and applied approaches.

SOCI 4087/5087 The Family in Transition (3 credits)—*Prerequisite(s): SOCI 1020.* An analysis of the changing family with emphasis on family theory.

SOCI 4157/5157 Sociology of the City (3 credits)—The sociology of modern urban centers with emphasis upon the development, social organization, and social change that characterize this aspect of modern society, and the influence of urban patterns upon the total society.

SOCI 4257/5257 Power, Wealth, and Poverty (3 credits)—*Prerequisite(s): SOCI 1020.* Examination of the theories and research concerning the distribution of power, wealth, and prestige in American society, and the impact of social class on life chances.

SOCI 4337/5337 Social Psychology (3 credits)—*Prerequisite(s): SOCI 1020.* Study of social interaction, the development of self, and the social construction of reality.

SOCI 4507/5507 Sociology of the Aging (3 credits)—*Prerequisite(s): SOCI 1020.* An application of basic sociological principles, theories, and research findings to the understanding of the aging and their relationships with other segments of the population.

SOCI 4557/5557 Population (3 credits)—*Prerequisite(s): SOCI 1020.* Major population characteristics, trends, and problems, primarily those of the United States.

SOCI 4807/5807 Modern Social Theory (3 credits)—*Prerequisite(s): SOCI 1020.* This course provides a comprehensive survey of key modern social theorists and theories within the historical context of the emergence of the modern world order. Fall

SOCI 4900 Independent Studies (1-3 credits)

SOCI 4957/5957 Special Topics in Sociology (1-6 credits)

SOCI 4989-99 Internship/Cooperative Education (1-3 credits)

Social Work
SOWK

SOWK 1010 Introduction to Social Work (3 credits)—Introduces students to the profession of social work and provides an overview of the professional knowledge, skills, and values necessary for generalist social work practice. Students are introduced to the historical evolution of social work, the history of social welfare, the various fields of social work practice nationwide and in the Appalachian region, and general systems theory.

SOWK 1020 Professional Values and Ethics (3 credits)—This introductory course provides a forum for examining personal, professional, and societal values and for developing the skills needed to make ethical decisions in social work and in other helping professions. The course examines core professional values, principles, and ethical standards that are the bases for identifying ethical issues, for examining all possible resolutions and their potential outcomes or possible repercussions, and for reaching thoughtfully reasoned conclusions to complex ethical dilemmas. Boundary issues as a specific type of ethical concern are highlighted, as related to the roles of student, client, professional helper, and supervisor. This course introduces students to the practicalities of malpractice risk and liability.

SOWK 1030 Cultural Diversity (3 credits)—The dual purpose of this course is to introduce the knowledge necessary for social work practice with disadvantaged, marginalized, and oppressed groups and to advance a philosophy that people come first and must be treated with dignity and respect. Issues of power, privilege, prejudice, discrimination, oppression, civil rights, historical and legal heritage, and contemporary news events are central course components. Opportunities are provided for examining personal values and beliefs and their impact on interactions with minority groups. Although several aspects of diversity are examined, the emphasis is on race, class, gender, ethnicity, and affectional orientation. Implications for sensitive, effective, and affirming practice with minority groups are examined.

SOWK 1100 Social Service Resources (1 credit)—*Prerequisite(s) or Corequisite(s): SOWK 1010 and major status.* Designed to provide students the opportunity to develop and demonstrate knowledge and understanding of social work agencies and clientele. Additionally, the development of self-awareness is expected, particularly as related to the student's own suitability for social work in specific agencies.

SOWK 2400 Social Institutions In Appalachian Culture (3 credits)—Designed to provide an understanding and appreciation of the unique cultural characteristics of rural and Appalachian people, with a focus on the impact of major social institutions, e. g. , family, religion, social welfare, education, and economics. The role of generalist social work practice in rural areas and in Appalachia is explored in order to prepare students to become more effective service providers in the region.

SOWK 2500 Interviewing and Recording Skills (3 credits)—*Prerequisite(s): SOWK 1010.* Provides a beginning knowledge base and the development of interviewing and recording skills essential for generalist social workers and those pursuing other human service professions. This course focuses on interviewing and recording techniques that can be applied to all levels of social work practice. Interviewing and recording skills are developed through the use of role play and videotaped scenarios. Systems theory is applied to the conscious selection of techniques to be used with various populations at different levels of practice.

SOWK 3000 Human Behavior/Social Environment I (3 credits)—*Prerequisite(s): SOWK 1010, SOWK 1020, SOWK 1030, SOAA 1020, PSYC 1310, and one of the following BIOL 1010/11, BIOL 1020/21, BIOL 1110/11 or HSCI 2010/11; Corequisite(s): SOWK 3010; Prerequisite(s) or Corequisite(s): HDAL 2310.* This course provides basic knowledge about human behavior from a person-in-environment perspective. It helps the student to recognize the unique challenges confronting individuals and families who suffer oppression and discrimination. It identifies the adaptive strategies that people employ to cope with adversity. It presents a strengths-based, problem-solving approach, which constitutes the assessment phase of generalist practice at the micro level.

SOWK 3010 Human Behavior/Social Environment II (3 credits)—*Prerequisite(s): SOWK 1010, SOWK 1020, SOWK 1030, SOAA 1020, PSYC 1310, and one of the following BIOL 1010/11, BIOL 1020/21, BIOL 1110/11 or HSCI 2010/11; Corequisite(s): SOWK 3000. Prerequisite(s) or Corequisite(s): HDAL 2310.* Provides a social work orientation to understanding human behavior in large groups, communities, and formal organizations. Theories for macro change are explored. The concept, function, and structure of communities and organizations as systems are examined. Explicit attention is given to the patterns and consequences of discrimination and oppression.

SOWK 3430 Social Welfare Policy and Services (3 credits)—*Prerequisite(s): PSCI 1120 and SOWK 1010.* This course addresses the history of social policies and subsequent programs put in place to address perceived social problems and includes legislative, judicial, and administrative efforts. Students develop an ability to analyze social policy as it relates to societal values, populations at risk of harm, the "status quo," and the socio-politico-economic climate of a particular time, including contemporary national policy debates.

SOWK 3462 Social Services for Children (3 credits)—Focuses on the development of child welfare programs and services, contemporary issues such as child neglect and abuse, and modes of professional intervention on behalf of children and families. Particular emphasis will be given to service provision in the Appalachian region.

SOWK 4210 Social Work Research (3 credits)—*Prerequisite(s): MATH 1530, CSCI 1100, SOWK 1010.* This course is designed to provide students with an understanding and an appreciation for the scientific approach. Students will have the opportunity to understand how the scientific approach is used to build a knowledge base for generalist social worker practice and how it is used to evaluate practice/program effectiveness. Standards for ethical behavior applicable to the scientific process are presented and discussed. Furthermore, this course will require the student to become involved in understanding and applying qualitative/quantitative methods, data analysis techniques, practice/program evaluation designs, and in raising pertinent social work research questions. This course also requires students to critically evaluate research articles pertinent to generalist social work practice.

SOWK 4310 Social Work Practice I (4 credits)—*Prerequisite(s): SOWK 2500, SOWK 3000, and formal admission to the social work major. Corequisite(s): SOWK 4320.* This course provides the general method as a practice framework for beginning social work practice. Building on foundation knowledge, values, and skills introduced in SOWK 1020, SOWK 2500, and SOWK 3000, this course emphasizes an ecological-systems approach to problem solving. Students further develop this foundation as it relates to engagement, data collection, assessment, intervention, evaluation, and termination phases in service delivery with a variety of systems. Primary emphasis is on micro and small group systems. Students learn how to work effectively without bias or discrimination. Students are required to participate in community-based learning experiences.

SOWK 4320 Social Work Practice II (4 credits)—*Prerequisite(s): SOWK 2500, SOWK 3010, SOWK 3430, and formal admission to the social work major; Corequisite(s): SOWK 4310.* This course provides the general method as a practice framework for beginning social work practice and moves the beginning generalist practitioner to more complex macro systems. Emphasis is placed on the problem-solving techniques of problem identification, research and data collection, assessment, design and selection of planned change strategies, implementation, and evaluation. Nondiscriminatory practice is reinforced. Students are required to participate in community-based learning experiences that incorporate program planning and development activities.

SOWK 4367/5367 Seminar in Alcohol and Drug Abuse (3 credits)—This survey course provides a basic understanding of alcohol and drug abuse. Students are introduced to the various classifications of drugs, abuse symptomatology, and causes of abuse. The characteristics of high-risk groups are examined along with various treatment models and preventive efforts. General systems theory provides the framework for looking at this societal problem and professional involvement with it. Attention is given to the regulations controlling the use of drugs in society.

SOWK 4453 Social Work Field Practicum (16 credits)—*Prerequisite(s): Senior status; Completion of all required major courses and General Education Core requirements; Overall GPA of 2. 25 and a 2. 5 GPA in required SOWK courses.* This is a one-semester-block field experience placement involving over 500 clock hours of educationally directed and professionally supervised social work activities in a social service setting in Appalachia. The student also is required to participate in regularly scheduled field integration seminars on campus. The practicum allows application of the theoretical knowledge, professional values, and practice skills acquired

throughout the curriculum so students can build on these practice elements in order to progressively engage in various roles of intervention and to employ a variety of methods. The purpose of the course is to enable the student to further develop generalist practice skills and to integrate professional knowledge, values, attitudes, skills, and theory with practice.

SOWK 4467/5467 Seminar in School Social Work (3 credits)— This course prepares students for licensure as a school social worker. It explores policies, practices, historical developments, and legislative trends affecting social work services in schools. School-community relationships are examined, as well as the impact of societal attitudes upon schools. Special emphasis is placed on the theory and practice expressed by the Tennessee Department of Education's "Minimum Competency Requirements for School Social Workers K - 12," "Criteria for the Evaluation of School Social Workers," and NASW Standards of Social Work Services in schools.

SOWK 4517/5517 Crisis Intervention (3 credits)—This survey course explores the various types of crises and approaches to crisis intervention in professional practice. General systems theory is the basic underlying framework. Students engage in role play, simulations, and games, to develop beginning professional skills needed to work with individuals, families, groups, and communities in crisis.

SOWK 4567/5567 Human Sexuality (3 credits)— This survey course on human sexuality introduces students to sexual attitudes, sexual physiology and response, sexual techniques and behavior, reproduction and reproductive control, sexually transmitted diseases, and how sexual behavior is learned and developed, i.e., psychosocial development and cultural impact. It provides students with the opportunity for value clarification and exploration of personal and social attitudes toward varying forms of sexual behavior and orientations.

SOWK 4900 Directed Independent Study (1-3 variable credit)— *Prerequisite(s): Permission of instructor and formal admission to the major.* Directed independent study on a topic that is related to social work practice and is of special interest to the student. Enables students to utilize research knowledge and skills in pursuing in depth a special area of interest. Students are provided guidance and direction by a faculty member who has expertise in the area of study.

SOWK 4928 Honors Study (3 credits)—*Prerequisite(s): Permission of instructor and senior status in social work.* Directed independent study or project on a topic that is related to social work practice and is of special interest to the student. The course is limited to senior social work majors who have attained a grade point average of 3.0 or above and show exceptional promise for the profession. Enables students to utilize research knowledge and skills in pursuing in depth a special area of interest. Students will be provided guidance and direction by a faculty member who has expertise in the area of study.

SOWK 4957/5957 Special Topics in Social Work (3 credits)— *Prerequisite(s): Junior or senior status.* Selected topics that relate to fields of practice, current issues in the profession, or area of special interest.

Spanish
SPAN

SPAN 1010 Beginning Spanish I (3 credits)—A study of the four language skills of speaking, listening, reading and writing. Includes introduction to Hispanic culture.

SPAN 1011 Beginning Spanish for Health Care I (3 credits)—A study of the four language skills of speaking, listening, reading and writing, with an emphasis on vocabulary and cultural situations appropriate for health care professions. This course does not satisfy high school deficiencies for students enrolled in areas other than health care professions.

SPAN 1020 Beginning Spanish II (3 credits) — P*rerequisite: A grade of at least C- in SPAN 1010 or with consent of Spanish coordinator.* A study of the four language skills of speaking, listening, reading and writing. Includes introduction to Hispanic culture.

SPAN 1021 Beginning Spanish for Health Care II (3 credits) — *Prerequisite: SPAN 1011.* A continuation of the study of the four language skills: speaking, listening, reading, and writing, with an emphasis on vocabulary and cultural situations appropriate for health care professions. This course does not satisfy high school deficiencies for students enrolled in areas other than health care professions.

SPAN 2010 Second-Year Spanish I (3 credits)—*Prerequisite: SPAN 1020.* Intermediate Spanish: grammar review, oral practice, and writing. Emphasis on Hispanic culture and literature. (A grade of at least C- in SPAN 1020, or consent of the Spanish coordinator is required.)

SPAN 2020 Second-Year Spanish II (3 credits)— *Prerequisite: A grade of at least C- in SPAN 2010 or with consent of the coordinator for Spanish.* Intermediate Spanish: grammar review, oral practice, and writing. Emphasis on Hispanic culture and literature.

SPAN 3003 Basic Spanish Grammar (3 credits)—*Prerequisite: SPAN 2020 or equivalent.* A review of basic Spanish structures, such as the uses of ser and estar, object pronouns, and verb conjugation. This course is designed to consolidate the language skills acquired in the introductory-level courses and to build communicative skills and cultural competency.

SPAN 3033 Hispanic Readings and Composition (3 credits)— *Prerequisite: SPAN 3003.* May be taken concurrently. An introduction to Hispanic literature with emphasis on writing.

SPAN 3113 Spanish Conversation and Composition (3 credits)— *Prerequisite: SPAN 3003.* May be taken concurrently. Practice in conversation, with emphasis on idioms, syntax, and current expressions. Study of grammar through written compositions.

SPAN 3123 Applied Spanish: Introduction to Translation (3 credits) — *Prerequisite: SPAN 3113.* This is a Writing Intensive (WI) course that teaches basic translation skills through an interdisciplinary approach. Grammar-based written exercises and English/Spanish and Spanish/English translations from various professional fields are assigned and corrected in class. A ten- (10-) hour service-learning requirement involves students in a project that promotes cordial, supportive, and meaningful relationships between Spanish-speaking and English-speaking community members.

SPAN 3213 Spanish Phonetics and Pronunciation (3 credits)— *Prerequisite: SPAN 3113.* May be taken concurrently. An introduction to the phonetic system of Spanish and its spoken peculiarities in the Hispanic world.

SPAN 3313 Civilization of Spain (3 credits)—*Prerequisite: SPAN 3113.* Geography, history, and culture of Spain.

SPAN 3413 Civilization of Latin America (3 credits)—*Prerequisite: SPAN 3113.* Geography, history, and culture of Latin America.

SPAN 3513 Survey of Spanish Literature (3 credits)—*Prerequisites: SPAN 3033 and SPAN 3113.* Representative works from Spanish literature.

SPAN 3613 Survey of Spanish-American Literature (3 credits)— *Prerequisites: SPAN 3033 and SPAN 3113.* Representative works from Spanish-American literature.

SPAN 3713 Hispanic Poetry (3 credits)—*Prerequisites: SPAN 3033 and SPAN 3113.* Works of the principal poets of Spain and Spanish America.

SPAN 4007/5007 Golden Age Drama (3 credits)—*Prerequisites: SPAN 3313 or SPAN 3513.* A study of the origins of the Spanish theatre through the 17th century, with particular emphasis on Lope de Vega, Tirso de Molina, Juan Ruiz Alarcon, Calderon de la Barca, and Francisco de Rojas Zorrilla.

SPAN 4017/5017 Advanced Spanish Grammar I (3 credits)— *Prerequisite: SPAN 3313.* A study of complex grammatical aspects of the language such as ser vs estar, preterite vs imperfect, and the subjunctive.

SPAN 4018 Honors Thesis (3-6 credits)—Open to those in university honors programs only. A Capstone experience serving as the culmination of an honors curriculum.

SPAN 4027/5027 Advanced Spanish Grammar II (3 credits)— *Prerequisite: SPAN 3113.* A study of complex grammatical aspects of the language such as the subjunctive in adverbial clauses, prepositions, placement of descriptive adjectives, pronouns, verbs used reflexively, and the passive voice.

SPAN 4107/5107 Cervantes (3 credits)—*Prerequisites: SPAN 3313 or SPAN 3513*. A study of the representative works of Miguel de Cervantes Saavedra, with special emphasis on the Quijote.

SPAN 4117/5117 Hispanic Cinema (3 credits)—*Prerequisites: SPAN 3313, 3413, 3513, or 3613*. A study of cinematic works from Latin America and Spain within the context of Hispanic literature and culture.

SPAN 4127/5127 Applied Spanish: Introduction to the Spanish-Speaking Communities (3 credits)—*Prerequisite: SPAN 2020 or equivalent*. This is a community-based course which provides students with the knowledge and skills to effectively interact with members of Spanish-speaking communities in both social and professional contexts. This course teaches cultural competence and diversity through an interdisciplinary approach involving students and faculty in the promotion of cordial, supportive, and meaningful relationships between Spanish-speaking and English-speaking community members. Students complete substantial field experience in Spanish-speaking communities.

SPAN 4137/5137 Applied Spanish: Translation and Community Outreach (3 credits)—*Prerequisite: SPAN 3113*. Basic translation skills are taught with a focus on health care or legal translation during alternate years. Students prepare written translation exercises that are discussed and corrected in class. This class includes a ten (10) hour service-learning requirement.

SPAN 4147/5147 Applied Spanish: Interpretation and Community Outreach (3 credits)—*Prerequisite: SPAN 3113*. The basic interpretation skills of sight translation, consecutive, and simultaneous interpretation are taught with a focus on health care and legal interpretation during alternate years. Students prepare oral interpretation exercises that are presented and critiqued in class. This class includes a ten (10) hour service-learning requirement.

SPAN 4207/5207 Nineteenth-Century Spanish Literature (3 credits)—*Prerequisite: SPAN 3313 or SPAN 3513*. Selected works by the principal 19th-century novelists and dramatists of Spain.

SPAN 4307/5307 The Generation of '98 (3 credits)—*Prerequisite: SPAN 3313 or SPAN 3513*. The origins, development, and influence of this early 20th century renaissance of Spanish letters, with attention given to the most representative poets, dramatists, and novelists of the period.

SPAN 4407/5407 Twentieth-Century Spanish Literature (3 credits)—*Prerequisite: SPAN 3313 or SPAN 3513*. Selected works by the principal 20th century novelists and dramatists of Spain.

SPAN 4507/5507 Spanish Short Story (3 credits)—*Prerequisite: SPAN 3313, 3413, 3513, or 3613*. Spanish and Spanish-American short stories from the 19th and 20th centuries.

SPAN 4607/5607 Modernist Movement in Spanish America (3 credits)—*Prerequisite: SPAN 3413 or SPAN 3613*. A study of Rubén Dari'o, his contemporaries and followers.

SPAN 4707/5707 Spanish-American Theatre (3 credits)—*Prerequisite: SPAN 3413 or SPAN 3613*. Selected works of the principal 19th- and 20th - century dramatists of Spanish America.

SPAN 4737/5737 Art at the Prado Museum (3 credits)—*Prerequisite: SPAN 2020 or equivalent*. A study of the major school of painting at the Prado, with emphasis on the Spanish artists.

SPAN 4807/5807 Spanish-American Novel (3 credits)—*Prerequisite: SPAN 3413 or SPAN 3613*. Selected works by the principal novelists of Spanish America.

SPAN 4903 Special Studies in Spanish (1-3 credits)—*Prerequisite: SPAN 3113*. Designed to provide opportunities for study in areas not provided for in regular course offerings for undergraduates. Students desiring to enroll must obtain permission from the instructor.

SPAN 4957/5957 Topics in Spanish (3 credits)—*Prerequisite: SPAN 3113*. This course gives students an opportunity to study special problems and new developments in the field of Spanish

Speech
SPCH

SPCH 1300 General Speech (3 credits)—A study of effective intrapersonal, interpersonal, group, and public communication, as well as an introduction to communication theory and nonverbal communication.

SPCH 2300 Public Speaking (3 credits)—The study and practice of preparing, delivering, and analyzing public speeches.

SPCH 2320 Argumentation and Debate (3 credits)—An introduction to oral argumentation and debate, including case construction techniques, case analysis and criticism, and research methods.

SPCH 2325 Speech and Debate Team (1-3 credits)—*Prerequisites: SPCH 1300, SPCH 2300, or SPCH 2320*. Students earn credit for participating in the department's Speech and Debate team, which competes in tournaments with other schools. During team meetings students learn and practice delivery skills, debate case construction, various speech genres, and other topics relevant to inter-collegiate competition. Repeatable for up to 6 credit hours.

SPCH 2330 Communication Theory (3 credits)—This course applies modern and traditional communication theories as analytical tools to understand how communication operates in a variety of settings.

SPCH 2999 Cooperative Education (1-3 credits)

SPCH 3300 Qualitative Research Methods in Communication (3 credits)—An applied examination of qualitative research methods in the study of human communication.

SPCH 3310 Intrapersonal Communication Processes (3 credits)—A study of those processes that take place within communicators as they speak, listen, and process information with special emphasis on the functional and dysfunctional effects of those processes on the cognitive domain.

SPCH 3330 Quantitative Communication Research Methods (3 credits)—A study of the methods and issues concerning designing, implementing, and evaluating communication research in intrapersonal, interpersonal, group, public speaking, and mass media situations.

SPCH 3340 Rhetorical Criticism (3 credits) — A study of the methods for analyzing oral, written, and non-discursive texts. Students will learn traditional and contemporary approaches to understanding the meanings of public messages.

SPCH 3346 Speaking for Social Change (3 credits) — *Prerequisites: SPCH 2300 or 2320 or permission of instructor*. Provides advanced-level training in various forms of public address and channels that turn training into civic engagement efforts that challenge issues of privilege, power, and difference.

SPCH 3350 Interpersonal Communication (3 credits)—A study of the theoretical foundations and the applied practice of interpersonal and relational communication.

SPCH 3380 Dynamics of Group Leadership (3 credits)—*Prerequisite: Either SPCH 1300, 2300, or 2320*. A study of communication in small groups with emphasis on building leadership skills and improving group problem-solving efforts.

SPCH 3390 Persuasion (3 credits)—A study of available means of influencing another person/group and conducting mass campaigns and advertising. Emphasis is on influence through the speech medium, but other verbal and nonverbal channels of persuasion are considered.

SPCH 4018 Honors Thesis (3-6 credits)—Open to those in university honors programs only. A capstone experience serving as the culmination of an honors curriculum.

SPCH 4200 Gender and Communication (3 credits) — A study of how communication influences gender and gender influences communication. Explores communication practices that show the most promise for fostering more humane living for women and men.

SPCH 4210 Family Communication (3 credits)—Explores how family systems use communication to create, sustain, and change individual identity and social reality. This course broadly construes the concept of family.

SPCH 4317/5317 Rhetoric and Public Address (3 credits)—Historical study of rhetorical theory as applied to manuscripts, speakers, and audiences.

SPCH 4346 Business and Professional Communication (3 credits)— *Prerequisite: Either SPCH 1300, 2300, or 2320*. A study of communication insights and development of skills to achieve professional competence.

SPCH 4356 Intercultural Communication (3 credits) — This course explores theories, research, and practice of cross-cultural communication. Cultural differences and similarities will be explored, as will methods for improving intercultural communication.

SPCH 4357/5357 Communication in Organizations (3 credits)—A study of communication needs, problems, and practices within various organizations.

SPCH 4366 Communication Ethics (3 credits)—A study of ethical principles of interpersonal and public communication, with special attention to the practice of the communication professions.

SPCH/PUBH 4377/5377 Health Communication (3 credits)—A study of the interpersonal, group, organizational, and public communication processes that shape beliefs, decisions, and behavior regarding health, sickness, and health care. The course examines the attitudes and actions of many participants in health communication, including citizens, health professionals, and those engaged in public debate of health issues. Students cannot receive credit for both SPCH 4377 and PUBH 4377.

SPCH 4380 Speech Communication Internship (3 credits)—A supervised experience in an agency, business, church, or other organization in a position that significantly utilizes theories and skills of speech communication.

SPCH 4417/5417 Teaching Secondary Speech and Theatre (3 credits)—May not be applied to major or minor in speech or theatre. A study of speech and theatre teaching methods for the secondary school.

SPCH 4437 Conducting Secondary Speech Program (3 credits)—A study of the co-curricular activities related to the effective curricular offering in the secondary school.

SPCH 4607/5607 Speech Practicum (3 credits, repeatable)—*Prerequisite(s): Permission of instructor*. A practical study experience with appropriate supportive research. May be repeated.

SPCH 4900 Independent Studies (1-3 credits)—*Prerequisite(s): Permission of instructor*. Designed to provide opportunities for study in subject matter areas not provided in the regular course offerings. May be repeated.

SPCH 4957/5957 Special Topics in Speech and Theatre (1-6 credits)

Special Education
SPED

SPED 2300 Exceptional Learners in Schools and Communities (3 credits)—This course will enable the student to identify the psychological, physical, educational, medical, behavioral, and learning characteristics and needs of individuals with various disabilities, as well as students from diverse cultural, social, ethnic, and racial backgrounds and adopt instructional techniques to fit individual needs. Inclusion of students with disabilities will be emphasized. An understanding of legislation, regulations, and litigations related to serving individuals with disabilities will enable the student to correlate individualized educational programs with the principles of normalization and least-restrictive environment. The integration and working relationships of families, school, vocational, and local service agencies will be addressed to provide an understanding of assistance and referral networks. Students are required to complete 10 hours of service learning over the course of the semester in a setting with individuals with disabilities. (fall, spring, summer)

SPED 3300 Instructional Methodology in Special Education (3 credits)—This course prepares the teacher candidate to design, implement, and evaluate instructional sequences and overall effectiveness of school programs serving learners with special needs. Students learn to incorporate information from assessments into Individualized Educational Program objectives, write, and sequence annual and short-term goals, emphasizing parent involvement, values, and choice, and implement research-supported instructional strategies and practices. (fall; spring; summer of 2012 only; Sevierville cohort)

SPED 3322 Early Intervention Strategies for the Exceptional Child (3 credits)—A lecture course designed to relate child development to the social, educational and familial needs of the child with disabilities. This course will cover the various characteristics of young children with special needs and their families, across and within classification. Particular emphasis will focus on how these traits impact on the child's developmental rate, abilities, and sequence. Some intervention strategies will be covered. A field experience in an early childhood program will be required. (spring)

SPED 3350 Medical Aspects in Special Education (3 credits)—*Prerequisite(s): SPED 2300*. This course provides information on the medical aspects of developmental disabilities. This course will provide students with a general knowledge of the medical conditions more commonly seen in children with disabilities. It will familiarize students with common terminology, medications, procedures, equipment, and interventions used with children with medical complications frequently related to developmental disabilities. Regulation covering teacher responsibilities in regards to medical conditions will be covered. (spring; Sevierville cohort)

SPED 3365 Integrating Functional Skills into Curriculum (3 credits)—*Prerequisite: Admission to teacher education*. This course provides curriculum approaches and strategies to enable the student to design, implement, and monitor functional and age-appropriate programs for children and youth with moderate and severe disabilities in both school and community-based settings. Course content is to include domestic living, community mobility and social instruction, prevocational and vocational training and advocacy to accommodate a viable transition toward independent adult living. Field work is required. (spring; Sevierville cohort)

SPED 3400 Behavior Management for Individuals with Disabilities (3 credits)—*Prerequisite(s): SPED 2300; Corequisite(s): SPED 3410*. A course designed to provide the student with opportunities to learn about and practice various management techniques appropriate for children with disabilities in normal and special settings. (fall)

SPED 3410 Preclinical Experience in Behavior Management (1 credit, may be repeated)—*Corequisite(s): SPED 3400*. Preclinical experience in special education is a supervised opportunity for students to gain experience in classroom and other settings which provide direct instruction to children and youth with disabilities. The student will work with the classroom teacher to target classroom behavior problems and develop, implement, and evaluate the effects of interventions for that behavior. Thirty (30) hours of field work is required. (fall; Sevierville cohort)

SPED 3445 Assistive Technology (3 credits)—*Prerequisite: Admission to teacher education*. This course provides an in-depth examination of the applications of assistive technology for individuals with disabilities as it relates to teaching and learning in special education. Existing research with students with special needs will be reviewed, and new applications of existing and developing technology will be explored. This course meets the requirements for a Technology Intensive. (spring; Sevierville cohort)

SPED 4237/5237 Educating Persons with Learning Disabilities (3 credits)—This course addresses the process of assessing, designing, and delivering instruction to students with learning disabilities. Philosophical and practical perspectives will be integrated into a supportive framework of best practices that encompass both diagnosis and intervention. The latest research findings and most current practices in identifying and providing instruction to students with learning disabilities are incorporated. In addition, students are presented with information regarding the specific academic and social areas needed for instruction.

SPED 4350 Special Education Workshop (1-3 credits)—Special workshops covering various types of exceptionalities and issues associated with exceptionality. (fall, 2009 only; spring)

SPED 4411 Preclinical Experience in Strategies for Individuals with Severe Behaviors (1 credit)—*Prerequisites: SPED 3400 and admission to teacher education; Corequisite: SPED 4725*. Preclinical experience in special education is a supervised opportunity for students to gain experience with children and youth who engage in challenging behavior. The student will work with the classroom teacher and university supervisor to conduct a functional assessment and develop a behavior support plan. Emphasis will be placed on the application of strategies and techniques covered in SPED 4725. Thirty (30) hours of field work is required. (spring)

SPED 4420 Preclinical Experience in Management Strategies for Severe Behavior Disorders (1 credit) — *Prerequisite(s): SPED 3400 and admission to teacher education; Corequisite: SPED 4725*. Preclinical experience in special education is a supervised opportunity for students to gain experience with children and youth who engage in challenging behavior. The student will work with the classroom teacher and university supervisor to conduct a functional behavior assessment and develop a behavior support plan. Emphasis will be placed on the application of strategies and techniques covered in SPED 4725.

SPED 4427/5427 Persons who are Gifted (3 credits)—This course provides an in-depth examination of the special needs of children who are gifted and talented. Topics covered include definitions and characteristics of gifted and talented, content modifications for the gifted, and information-processing strategies.

SPED 4477/5477 Special Education Assessment (3 credits)—*Prerequisite: SPED 2300*. This course covers both formal, informal, curriculum-based diagnostic and assessment instruments. Their usefulness and non-usefulness will be covered. Students will have experience in the administration and scoring of at least one nationally norm-referenced test. Students will complete one case study. (spring; Sevierville cohort)

SPED 4487/5487 Collaboration with Families, Agencies, and Schools (3 credits)—*Prerequisite: Admission to teacher education.* This course is designed to introduce students to the principles, problems, and procedures of working in collaboration with parents of individuals with disabilities, as well as with agencies and professional organizations involved in the delivery of services to persons with disabilities. The course provides an overview of different approaches, current issues, and problems involved in working in collaboration with families and multiple agencies. Emphasis is placed on serving as a member of a professional team, interviewing and consulting with teachers and parents, and providing leadership in instruction and instructional adaptation. (spring)

SPED 4497/5497 Special Education Curriculum (3 credits)—*Prerequisites: SPED 3300 and admission to teacher education.* This course provides information on effective curriculum and instructional approaches used to help students with mild disabilities achieve mastery and proficiency in academic skills. Research-based approaches to teaching students with mild disabilities in the areas of reading, content area instruction, and study skills will be covered. (spring)

SPED 4627/5627 Educating Persons with Mental Retardation (3 credits)—This course discusses a variety of topics related to the field of mental retardation. Specific topics include the following: types, nature, and causes of mental retardation, characteristics of persons with mental retardation. assessment and identification procedures, and instructional strategies relating to the education of persons with mental retardation. Field experience is required.

SPED 4700 Inclusion Modifications (3 credits)—*Prerequisites: SPED 3300 and admission to teacher education. Corequisite(s): SPED 4710.* This course is designed to provide the student with skills needed to interpret curriculum guidelines and develop goals and objectives for students with disabilities of all grade levels to function in the least restrictive environment. Students will develop the ability to select and adapt strategies and materials to learning styles of students with disabilities or students identified as being at risk for future learning problems. Research-based approaches to teaching mathematics and written and oral language will be covered. This course meets the requirements for a Writing-Intensive Course. (fall – not offered fall 2009)

SPED 4710 Preclinical Experience in Special Education (2 credits)—*Corequisite(s): SPED 4700*. Preclinical experience in special education is a supervised opportunity for students to gain experience in the classroom and other settings which provide direct instruction to children and youth with disabilities. Techniques designed to increase task engagement and facilitate inclusion of students with special needs into the general education classroom will be explored and practiced. Sixty hours of field work is required. (fall)

SPED 4725 Management Strategies for Individuals with Severe Behaviors (3 credits)—*Prerequisite(s): SPED 3400 and admission to teacher education; or consent of the instructor; Co-requisite: SPED 4411*. This course is designed to instruct students in management strategies related to persons with disabilities who demonstrate severe challenging behaviors. Particular emphasis will be given to functional assessment but the course will include instruction in ecological assessment, data-based decision-making, and instructional strategies that can be used to develop interventions for children and youth with severe behavior disorders. There is a requirement for a functional behavioral assessment of a student or adult with a challenging behavior. (spring)

SPED 4750 Instructional and Transitional Services for Adolescents and Young Adults with Disabilities (3 credits)—*Prerequisite(s): admission to teacher education*. This course is designed to provide the student with skills to implement a transition program from school to career and daily living for individuals with disabilities, regardless of category of handicaps, of all age levels. Areas to be covered include vocational/career assessment, design and implementation of individualized programs utilizing integration of the roles of family, agencies, and business and industrial community. (fall)

SPED 4757/5757 Curriculum-Based Assessment (3 credits)—*Prerequisites: SPED 4477 and admission to teacher education*. This course is designed to help students acquire assessment skills needed to make instructional decisions, monitor progress and promote successful participation in the general education and special education curricula. Classroom-based methods of curriculum, learning, performance, and behavioral assessments will be presented. including data collection, designing and implementing interventions making curricular adaptations, and using data to make instructional decisions. (fall, even years; Summer 2013 for Sevierville cohort)

SPED 4850 Student Teaching in Special Education (6 credits)—*Prerequisite(s): Admission to teacher education and student teaching.* Student teaching in Special Education is a prearranged, supervised student teaching experience in a special education setting for one semester, leading to licensure in modified and/or comprehensive special education. Over the course of the semester the students will increase their roles in the classroom, culminating in assuming the roles and responsibilities of a fully functioning special educator. Written plans, journal, and student teaching portfolio will be developed and maintained. Placements will be made within a 45-minute radius of ETSU main campus. (fall, spring)

SPED 4957/5957 Special Topics in Special Education (1-6 credits) (fall)

Service-Learning
SRVL

SRVL 1020 Introduction to Service-Learning in the Community (3 credits)—This course allows the student to study the role of the volunteer and to be involved in service and learning in area agencies in order to provide a bridge between the campus and community populations. Integral components of class time include critical thinking, reflective practices as related to service, and honing the caring capacity of the individual. Emphasis is placed on oral and writing intensives and on familiarizing the student with potential career choices. Requires a 30–hour individual service placement and a group project. (fall, spring, summer)

SRVL 2000 Advanced Service-Learning (3 credits)—*Prerequisite(s): Completion of SRVL 1020 or instructor permission.* A continuation of work of introductory course: group work to produce a project of lasting community impact, area agency tours, and in-depth study of issues. (spring)

SRVL 3000 Cherokee Immersion Project (3 credits)—*Prerequisite(s): Permission of instructor required;. Students must contact instructor for interview prior to registering for courses; Corequisite(s): PHED 2555*. Six-week course offered in pre-summer and first session. Students study the history and culture of the Cherokee prior to spending three weeks camping on Qualla Boundary, North Carolina, and participating in service projects designated by the Cherokee.

SRVL 4000 Ecomposition: Reflective Writing in the Field (3 credits)—*Prerequisite(s): Permission of instructor*. The course will introduce students to a different way of seeing and exploring their world through reflective writing, emphasizing place and the role of humans in that place. Requiring service-learning and travel, the course may be offered in conjunction with other courses. Summer

Storytelling
STOR

STOR 4147/5147 Basic Storytelling (3 credits)—Study of and practice in storytelling. Uses of storytelling in various settings including classrooms, libraries, churches, and homes as public events.

STOR 4817/5817 Practical Applications of Storytelling: National Storytelling Festival Experience (1 credit)—This course provides the student with training in planning, directing, and administering a storytelling festival; Festival activities introduce the student to various storytelling styles and content

STOR 4827/5827 Storytelling Resource Evaluation (1-6 credits)—This course is designed to prepare the student to organize and participate in a storytelling festival.

STOR 4957/5957 Topics in Storytelling (1-6 credits)—*Prerequisite(s): Dependent on subject matter*. Selected topics of current interest in reading. Offered upon sufficient demand for specific subject matter. May be repeated for different topics. Consultation with the instructor is recommended before enrollment.

Surveying and Mapping Science
SURV

SURV 1038 Honors Orientation Seminar (1 credit)—*Prerequisite(s): Admission to College of Business and Technology or University Honors Program*. This course will fully orient the student to the College expectation for an honors student. Discussion and activities will relate to preparation for academic success and developing information technology skills. (on demand)

SURV 2038 Honors Professional Ethics (3 credits)—*Prerequisite(s): Admission to the College of Business and Technology, or University Honors Program, and Sophomore standing*. A case-study approach to basic ethical issues likely to confront engineer, computer scientists, family and consumer scientists, geographers and surveyors in their professional practices.

SURV 2550 Surveying Measurement Fundamentals (4 credits)—*Prerequisite(s) MATH 1720 or permission of instructor*. Principles of field data acquisition. measurements of distance, angle, and elevation using tapes, transits, and levels. basic surveying computations of elevations, directions, traverse closures and areas, magnetic directions, preparation of topographic maps from radial measurements, basic measurement error theory. Lectures and field labs. (fall; spring; summer, on demand)

SURV 2560 Surveying Graphics (4 credits)—*Prerequisite(s): One year of technical drawing or equivalent or permission of instructor*. Graphical communication in surveying and mapping, fundamentals of projection, map projection theory, 3-D viewing, spatial relationships and viewpoints, tracing, plotting and drafting maps, plats, profiles, cross-sections, sketches for field notes and presentations in technical reports, map accuracy standards, plotting data from field notes, contour theory, computations related to survey drafting. (fall)

SURV 3048 Honors Methods of Research (3 credits)—*Prerequisite(s): Admission to the College of Business and Technology or University Honors Program*. Analysis of the materials and methods of research. (on demand)

SURV 3510 Engineering and Construction Surveys (4 credits)—*Prerequisite(s): SURV 2550; Corequisite(s): SURV 2560, or permission of instructor*. Route and construction surveying, instrument adjustment and calibration, use of optical and electronic measuring instruments, large-scale site surveying and mapping, mine surveying, and miscellaneous field surveys. Lecture and lab. (spring)

SURV 3520 Land Survey Systems (2 credits)—The historical development, description, and basic legal land boundary elements related to the land survey systems in the U.S. state plane coordinate systems, deed, plat, and other land boundary-related recording systems, concept of the cadastre. (fall)

SURV 3530 Survey Measurement and Computational Analysis (4 credits)—*Prerequisite(s): MATH 1910, SURV 3510*. Nature of measurement, statistical analysis of random errors in measurements, propagation of errors, survey standards and design specifications, development of coordinate geometry and trigonometric solutions of plane surveying problems, programming hand-held field computers, analysis of errors and mistakes in indirect measurement. (fall, even years - A)

SURV 3540 Surveying Projects (3 credits)—*Prerequisite(s): SURV 2560 and SURV 3510; Corequisite(s): SURV 4537, SURV 4547, SURV 4550, or permission of instructor*. Projects utilizing principles learned in previous courses, with emphasis on training as group leader and in team participation to analyze and solve surveying field problems arising in surveying practice, planning and execution of projects, field identification of natural and man-made features. (summer, use as co-op)

SURV 3550 Advanced Surveying Mathematics (3 credits)—*Prerequisite(s): SURV 3530; Corequisite(s): MATH 2010*. Mathematical methods used in surveying sciences, weights of observations, precision of indirectly determined quantities, error ellipses, 2-D and 3-D coordinate transformations, least squares adjustments of survey data with applications to observed data with redundant measurements, computer programming of survey adjustments. (fall, even years - B)

SURV 3560 Geodetic Science (4 credits)—*Prerequisite(s): MATH 1910, SURV 3510, and SURV 3520*. Application of spherical trigonometry to earth measurements, ellipsoids, spheroids, flattening, eccentricity, use of geodetic control, relationship between longitude, latitude, and state plane coordinates, geodetic leveling and traverse, astronomic observations for precise azimuth, latitude, and longitude, crustal movements, tides, seismic soundings, satellite observations, and GPS. (fall, even years - C)

SURV 3630 Surveying Hydrology I (4 credits)—*Prerequisites: MATH 1910, PHYS 2020, PHYS 2021; Corequisite: SURV 3510 or consent of instructor*. Introduces the theory and practice of hydrologic analysis and design, analytical understanding of the basic phenomena of hydrology, and the study of a variety of practical quantitative methods for solving hydrologic problems. (fall, even years - B)

SURV 4038 Honors International Study (3 credits)—*Prerequisite(s): Satisfactory completion of all College of Business and Technology Honors courses or college honors committee approval*. This course will consist of a two-week international study and cultural experience in addition to a pre-tour orientation. (on demand)

SURV 4500 Senior Surveying Projects (2 credits)—*Prerequisite(s): SURV 2560, SURV 3510, and SURV 3520. Co-requisite: SURV 4537 or permission of instructor*. Project oriented course that will demonstrate competence of graduating students. Completed projects will show graduates abilities to potential employers and indicate skills at graduation. (fall, even years - C)

SURV 4517/5517 Photogrammetry (4 credits)—*Prerequisite(s): SURV 3510, and SURV 3520, or permission of instructor*. Use of aerial photographs for mapping, geometry of single photo and stereographic models, scale and relief displacement, vertical and tilted photos, parallax, photo mosaics, ground control, stereoplotters, resection, orthophotos, oblique photos, remote sensing. Lecture and lab. (fall, even years - A)

SURV 4520 Survey Science Topics (3 credits)—*Prerequisite(s): SURV 2560 and SURV 3520; Corequisite(s): SURV 3510 or permission of instructor*. An overview of surveying and mapping sciences not covered in other courses, including hydrographic surveying, mine surveying, surveying business practices, ethics, dendrology, and similar subjects. (fall, even years - B)

SURV 4537/5537 Land Boundary Location (4 credits)—*Prerequisite(s): FNCE 3130, SURV 2560, SURV 3510, and SURV 3520 or permission of instructor.* Role of the surveyor in retracing land boundaries, methods of boundary establishment, classification and analysis of boundary evidence, laws governing riparian boundaries, preparing deed descriptions and survey plats, preservation of survey evidence, surveyor as expert witness, ethics, liability, and professionalism in surveying. Lecture and lab. (fall, even years - C)

SURV 4547/5547 Land Subdivision and Platting (4 credits)—*Prerequisite(s): SURV 4537 or permission of instructor.* Physical elements of designing land subdivisions including circulation systems, sewer systems, drainage systems, soils and earthwork grading considerations, erosion control, lot and block arrangement, topography and existing land use factors, geometric analysis procedures, presentations to city planning and zoning boards, legal issues and ethics. (fall, even years - A)

SURV 4550 Automated Surveying and Mapping (3 credits)—*Prerequisite(s): SURV 3510, and third-year standing in surveying.* Use of computer-aided drafting and mapping from surveyed field data, familiarization with hardware and software available for surveying and mapping computations and drafting, data storage and output from automated devices used in surveying, use of total stations and electronic field data collection systems, field-to-finish projects. (fall, even years - A)

SURV 4567/5567 Positioning with GPS (3 credits)—*Prerequisite(s): SURV 3560 or permission of instructor.* A course designed to utilize GPS for data collection and post-processing, methods for adjusting networks, explore the reliability of networks, use of continuously operating reference systems (CORS), geometry of satellite constellation, vector processing strategies, the effects of atmospheric constraints on long baselines, use of on-the-fly technology, precise ephemeris generation, and differential corrections. (fall, even years - A)

SURV 4617/5617 Digital Imagery Processing (3 credits)—*Prerequisite(s): MATH 1920, SURV 4517/5517, or permission of instructor.* Use of software to analyze, enhance, and display satellite images from many sources. Project based course to determine needs for land use planning, environmental preservation, and sustainable development. Presentations to local planning departments and other interested parties. (fall, even years - B)

SURV 4630 Surveying Hydrology II (4 credits)—*Prerequisites: SURV 3530 and SURV 3630 or consent of instructor.* Understanding of the statistical methods in hydrology and introduction to subsurface hydrology and water quality estimation. (fall, even years - C)

SURV 4900 Independent Study in Surveying and Mapping Science (1-6 credits)—*Prerequisite(s): Minimum of nine credits earned in the subject area and approval of the instructor who will supervise the study.* A surveying/mapping problem by arrangement with a faculty member. An independent study plan is developed, approved, and then competed. Usually a technical report and laboratory/field experience required.

SURV 4957/5957 Special Topics in Surveying and Mapping Science (1-6 credits)—*Prerequisite: As determined on a topic by topic basis.* Special topics of current interest to groups of students concerning content not presented in regular course offerings. May be repeated for credit if materials covered are significantly different or advanced. (on demand)

(A=Spring 09, Fall 10, Spring 12, Fall 13, Spring 15, Fall 16; B=Fall 09, Spring 11, Fall 12, Spring 14, Fall 15, Spring 17; C=Spring 10, Fall 11, Spring 13, Fall 14, Spring 16, Fall 17)

Theatre

THEA

THEA 1030 Introduction to the Theatre (3 credits)—A study of the dramatic arts and modes of theatrical production for the understanding and appreciation of the living theatre as a cultural force in society.

THEA 1520 Stagecraft I (3 credits)—An introduction to the tools and materials used in theatrical production.

THEA 1530 Stagecraft II (3 credits)—*Prerequisite: THEA 1520.* An exploration of construction techniques used in theatrical production.

THEA 1800 Theatre Laboratory (1 credit)—Practical directed experience working on a construction and/or running crew for an ETSU Theatre production. Experience can be in scenery, lighting, costuming, makeup, properties, sound, or box office. Type of experience is determined by the instructor.

THEA 2118 Artistic Experience I (3 credits)—Open to those in the Honors Scholars Program only. A study of the history and scope of primarily Western theatre, its production, its performance, and its effect on and reflection of culture.

THEA 2200 Oral Interpretation of Literature (3 credits)—Interpretation and oral performance of poetry, prose, and drama. Includes theory, structure, and style.

THEA 2420 Theatre Design Basics (3 credits)—*Prerequisite(s): THEA 1520, THEA 1530.* An introductory course in scenery, costuming, and lighting design for the stage.

THEA 2500 Creative Drama (3 credits)—Methods of organizing and developing rhythmic movement, story dramatization, improvisation, and related dramatic activities for children.

THEA 2510 Acting I (3 credits)—An introductory acting terminology and technique course, utilizing exercises, improvisations, research, and scene study.

THEA 2525 Stage Makeup (3 credit)—Lecture and supervised laboratory in makeup for the stage, ranging from enhancement of personal facial features to complexities of age and character makeup.

THEA 2530 Dramatic Structure (3 credits)—Play analysis for the actor, director, designer or teacher of theatre.

THEA 2605 Theatre Practicum (1 credit)—*For freshmen and sophomore students only. Prerequisite(s) Permission of instructor through audition.* Participation as a performer or stage manager in planning, rehearsal, and performance of an ETSU Theatre production under faculty direction. May be repeated.

THEA 2800 Theatre Laboratory (1 credit)—Practical directed experience working on a construction and/or running crew for an ETSU Theatre production. Experience can be in scenery, lighting, costuming, makeup, properties, sound, or box office. Type of experience is determined by the instructor.

THEA 2999 Internship/Cooperative Education (1-3 credits)

THEA 3330 Scenic Design (3 credits)—*Prerequisite(s): THEA 1520.* A studio course in scenic design, covering the basic concepts of scenic design analysis and the creation of technical drawings for realizing scenic design. Students will also learn rendering and model building techniques.

THEA 3335 Lighting Design (3 credits)—*Prerequisite(s): THEA 1520.* Interpreting visual needs of scripts into lighting and color designs and translating designs to paper.

THEA 3345 Costume Design (3 credits)—*Prerequisite(s): THEA 1520; THEA 1530; THEA 2520.* A technology intensive studio course in costume design for the theatre which emphasizes play script analysis, the process of collaboration, research rendering techniques (traditional and computer generated), as well as the study of working designers both past and present.

THEA 3400 Acting for the Camera I (3 credits)—*Prerequisite(s): THEA 2510.* Acting techniques used in movies, television, industrial films, and commercials.

THEA 3435 Acting for the Camera II (3 credits)—*Prerequisite(s): THEA 2510 or RFTV 2600.* Acting Techniques used in television and in film.

THEA 3500 Voice and Diction (3 credits)—Improvement in individual speaking voice. emphasis on articulation, correct breathing, vocal quality, and diction. Working for a standard American stage dialect.

THEA 3510 Acting II (3 credits)—*Prerequisite(s): THEA 2510.* Building characters *The Stanislavsky System* utilizing exercises, improvisations, research, and realistic scene work.

THEA 3512 The Audition Process (3 credits)—*Prerequisite(s): THEA 2510*. Creating audition pieces, developing techniques for cold readings, developing resume, and understanding proper conduct at auditions and interviews.

THEA 3515 Theatre Movement (1 credit)—Development of the actor's expressive skills, with particular attention to physicality, breath, gesture, and spatial awareness through movement and stage combat exercises.

THEA 3520 Theatre History I (3 credits)—A study of the development of theatrical art through the Restoration and the 18th century in England, its role in the history of civilization, and its relation to other arts in society.

THEA 3525 Theatre History II (3 credits)—A study of the development of theatrical art from the 18th century, its role in the history of civilization, and its relation to other arts in society.

THEA 3530 Play Direction (3 credits)—*Prerequisite(s): THEA 2510 and THEA 2530*. Basic principles of staging, picturization, composition, focus, movement, text analysis, directorial scoring, and actor/director relationships.

THEA 3535 Musical Theatre History (3 credits)—This writing intensive course will examine the history of American Musical Theatre, focusing on mid-1800 to the present. Attention will be given to the historical influences of the American Musical Theatre, the development of the various genres of American Musical Theatre, as well as to the development of the elements of modern American Musical Theatre—the book, the lyrics, the score, the dance, and the design.

THEA 3625 Advanced Stage Makeup (3 credits)—*Prerequisite(s): THEA 2525*. An advanced studio course emphasizing the principles, theories, and techniques of three-dimensional theatrical makeup. The techniques of producing plaster face casts and foam latex prosthetics will be explored.

THEA 3800 Theatre Laboratory (1 credit)—Practical directed experience working on a construction and/or running crew for an ETSU Theatre production. Experience can be in scenery, lighting, costuming, makeup, properties, sound, or box office. Type of experience is determined by the instructor.

THEA 4018 Honors Thesis (3-6 credits)—Open to those in university honors programs only. A capstone experience serving as the culmination of an honors curriculum.

THEA 4417/5417 Teaching Theatre in Grades K-12 (3 credits)—A study of methods and materials for teaching theatre in elementary and secondary schools.

THEA 4527/5527 Advanced Scenographic Design (3 credits, repeatable)—*Prerequisite(s): THEA 1520, THEA 3330, and THEA 3335*. The study of theatrical design principles and appropriate play analysis. May be repeated under each of the following areas: scenery, lighting, and costuming.

THEA 4537/5537 Advanced Play Direction (3 credits)—*Prerequisite: THEA 3530*. The planning of an actual production for performance for practical development of the fundamentals, methods, and procedures of play direction.

THEA 4547 Dramatic Theory and Criticism (3 credits)—*Prerequisite: THEA 1500*. A study of the critical writings on the theory of dramatic form from Aristotle to the present with an understanding of philosophical and social foundations as they relate to theatrical standards of dramatic art.

THEA 4557/5557 Playwriting (3 credits) — *Prerequisite: THEA 2530*. A study of the organization of the parts of a play in dramas of difference styles and types followed by exercises in writing dramatic exposition, characterization, and plot development for the foundation of an original play.

THEA 4607/5607 Theatre Practicum (1 credit) — *Prerequisite(s): Junior, senior or graduate status only, permission of instructor through audition*. Participation as a performer or stage manager in planning, rehearsal, and performance of an ETSU Theatre production under faculty direction. May be repeated.

THEA 4637/5637 Theatre Management (3 credits)—Procedures used in stage, house, and business management of a theatre operation.

THEA 4647/5647 Theatre Architecture and Design (3 credits)—*Prerequisite(s): THEA 1520 and THEA 3330; or permission of instructor.* This course will survey the changes in the theatre architecture for the 5th century, B.C. to the present. Students in this course will learn about modern facility design practices and about federal and state laws that affect the design of both new facilities and renovation of existing facilities.

THEA 4707/5707 Theatre Internship (1-9 credits)—*Prerequisite(s): Permission of department chair and concurrence of host theatre.* Experience in professional nonacademic theatre under supervision of professional staff Interns may work in a single area of specialty or in rotation throughout host theatre's operation and may contract for single term or academic year.

THEA 4800 Theatre Laboratory (1 credit)—Practical directed experience working on a construction and/or running crew for an ETSU Theatre production Experience can be in scenery, lighting, costuming, makeup, properties, sound, or box office Type of experience is determined by the instructor.

THEA 4857/5857 Period Acting Styles (3 credits)—*Prerequisite(s): THEA 2510*. Acting styles from ancient Greece through Restoration, utilizing language, research, scene work, movement, and masks.

THEA 4867/5867 Summer Theatre Performance (3 credits)—*Prerequisite(s): Permission of instructor through audition*. Participation in rehearsals and performance of an ETSU Summer Theatre production under faculty or guest artist direction.

THEA 4900 Independent Studies (1-3 credits)—*Prerequisite(s): Permission of instructor*. Designed to provide opportunities for study in subject matter areas not provided in the regular course offerings. May be repeated.

THEA 4957/5957 Special Topics in Speech and Theatre (1-6 credits)

University Honors
UHON

UHON 1108 Honors Colloquium I (1 credit) — UHON 1108 is for students entering ETSU as freshmen Honors Scholars or Fine and Performing Arts Scholars. Students explore career options; learn what it takes to achieve success in a given field; explore opportunities for study abroad; and participate in a service project. May be repeated once. (fall, spring)

UHON 1218 Artistic Vision (3 credits) — A foundation course for students in the Fine and Performing Arts Scholars Program, introducing arts scholars to the general philosophies used to describe the nature and the diversity of the arts while building a sense of community. (fall)

UHON 2018 Roving Artists I (2 credits) — *Prerequisite: UHON 1218*. An exploration of the diversity of art forms and their relationship to the public, sharing expertise and experiences, and examining the roles of art in society through preparation for art activities on campus. Enrollment is by permit only (Fine & Performing Arts Program, Honors College). (fall)

UHON 2028 Roving Artists II (2 credits) — *Prerequisite: UHON 2018*. A continuation of UHON 2018. An exploration of the diversity of art forms and their relationship to the public, with an emphasis on executing art which will have an impact on the greater campus community. Enrollment is by permit (Fine & Performing Arts Program, Honors College). (spring)

UHON 2108 Honors Colloquium II (1 credit) — *UHON 2108 is for Sophomore Honors Scholars*. Students do a Job Market Analysis for their chosen profession; research major scholarships and fellowships; work on a Standard of Greatness project; assume a leadership position on a service project; and begin participating in the conversations of their respective disciplines. May be repeated once. (fall, spring)

UHON 3008 Foundations of Research (2 credits)—The course is offered for students in the Midway Honors Scholars Program. Instruction focuses on basic research skills, issues, in ethics and responsible conduct of

research, and ETSU regulations for research. Students are introduced to the diversity of research/scholarly activities across disciplines and are assisted through initial stages of designing and proposing a research project. (fall)

UHON 3018 Roving Artists III (2 credits)—*Prerequisite: UHON 2028*. A continuation of UHON 2028. An exploration of the diversity of art forms and their relationship to the public, sharing expertise and experiences in creating their art, and examine the roles of art in society through preparation for art activities off campus. Enrollment is by permit only (Fine & Performing Arts Program, Honors College). (fall)

UHON 3028 Roving Artists IV (2 credits) — *Prerequisite: UHON 3018*. A continuation of UHON 3018. The practice of art as socially oriented activity through team projects that showcase the arts through art fairs, performances, and through campus or local community projects and events. Enrollment is by permit only (Fine & Performing Arts Program, Honors College). (spring)

UHON 3108 Honors Colloquium III (1 credit) — UHON 3108 is for Junior Honors Scholars and Midway Scholars. Students are introduced to thesis research; participate in a Mock Interview; assemble a dossier; interview someone in their field; and research opportunities for presenting papers at conferences in their discipline. Students are strongly encouraged to spend a semester abroad. May be repeated once. (fall, spring)

UHON 4108 Honors Colloquium IV (1 credit) — UHON 4108 is for Senior Honors Scholars, Fine and Performing Arts Scholars, and Midway Scholars. Students create a thesis schedule; participate in a thesis peer group; participate in a dossier peer group; present their thesis at a conference in their discipline or at the Appalachian Research Symposium or Forum; create a Summer Reading List; and serve as mentors to the new students in UHON 1108 and 3108. May be repeated once. (fall, spring)

UHON 4808 Honors Study Abroad (1-6 credits)—This course identifies study abroad experiences sponsored by ETSU for various disciplines. Course sections identify individual programs that will take the student to international localities to explore aspects of culture, language, history, science, business, and the arts, as appropriate to the particular program. (summer)

Women's Studies
WMST

WMST 2010 Introduction to Women's Studies (3 credits)—This introduction to the interdisciplinary academic field has a triple focus: integrating information about women's contributions to culture and history into the curriculum, uncovering and understanding structures of oppression (gender, race, and class), and exploring possibilities for change. Topics for reading and discussion will be drawn from material on social structures, law, language, history, religion, philosophy, the healing professions, and the arts. Articulating questions and points of view regarding issues related to gender is stressed.

WMST 2020 Women in Global Perspective (3 credits)—Emphasizes diversity of women's experience in non-western, non-industrialized societies. Concentrates on women's participation in, interaction with, and resistance to patriarchal structures that inhibit economic, political, and human rights for women.

WMST 3330 Feminist Thought and Practice (3 credits)—*Prerequisites: WMST 2010 or WMST 2020*. Explores a variety of theoretical frameworks for studying women and gender and links feminist theory to social action and civic responsibility.

WMST 4018 Honors Thesis (3-6 credits)—Open to those in university honors programs only. A capstone experience serving as the culmination of an honors curriculum.

WMST 4080 Women's Studies Internship (3 credits)—*Prerequisites: WMST 2010, senior standing, and director approval*. All students must attend a mandatory orientation meeting and turn in a completed internship permission form before working any hours on site. Supervised professional, non-profit, civic group, or other social justice work experience that synthesizes the student's program of study.

WMST/HIST 4247/5247 History of Women in U. S., Settlement to 1945 (3 credits)—An investigation of the social, economic, and political roles of women in the life of the nation, from European contact with Native Americans to the end of World War II.

WMST 4500 Women's Studies Senior Capstone (3 credits)—*Prerequisites: WMST 2010 and WMST 2020*. A synthesis course through which students draw from their individual courses of study to develop and pursue social justice, professional, and/or advanced educational objectives.

WMST 4900 Independent Study (1-3 credits)—*Permission of program director required*. This course is designed for advanced Women's Studies students who would like to pursue further study in areas not covered by Women's Studies curriculum. Students are to work independently, but under the supervision of a Women's Studies faculty member. Students desiring to use this option must prepare a proposal, in consultation with the faculty member, that describes the course objectives, learning outcomes, reading list, course requirements and their due dates, and method of faculty evaluation of the student's work. Proposal must be approved by the program director.

WMST 4950 Issues in Women's Movement (3 credits)—*Prerequisite: WMST 2010 or WMST 2020*. Studies of various themes and issues related to women's social movement(s). This course may be repeated under different subtitles.

WMST 4957/5957 Special Topics in Women's Studies (3 credits)—*Prerequisite: Junior or Senior standing*. A seminar on selected topics of interest in Women's Studies that are not covered in regular course offerings. Content will vary. May be repeated for credit when content changes.

Regents Online Degree Program (RODP)

ACC 1104 Principles of Accounting 1 (3 credits)—*Prerequisite(s): Students should have the reading and writing skills appropriate and expected of college-level students. In addition, students should possess basic math skills including the ability to solve simple algebraic equations.* This is part one of a two-course sequence. This course will cover the basic principles of accounting: teaching the basic principles of analyzing transactions, recording them in a general journal, posting them to the general ledger, and preparing the basic financial statements. This course is fully transferable.

ACC 1105 Principles of Accounting II (3 credits)—*Prerequisite: ACC 1104 Principles of Accounting I or similar first semester accounting course* ***with a grade of C or better.*** This is the second semester of a two-semester sequence in principles of accounting. In it, you will complete your studies of basic financial accounting and move into the basic concepts and computations associated with cost and managerial accounting. When you complete this course, you will have completed the undergraduate requirements for two semesters of basic accounting principles.

AGR 130 Introduction to Animal Science (3 credits)—Fundamental principles of animal agriculture, biological and scientific aspects of development, inheritance, feeding and nutrition, management, animal products, and scope of the industry. 3 semester credit hours.

ART 1010 Art History Survey I (3 credits)—This course is a survey of the visual arts, in world cultures, from prehistory to the Renaissance.

ART 1020 Art History Survey II (3 credits)—A survey of the visual arts, in world cultures, from the Renaissance through the present.

ART 1030 Art Appreciation (3 credits)—The overall purpose of this course is to provide the student with a basic understanding of the visual arts. The first half of the course deals with the nature of art, the evaluation of art, the processes and materials of art. We examine the formal elements of design and look at a wide variety of both two- and three-dimensional art to learn about the processes and tools involved in its creation. The second half of the semester is spent in a (more or less) chronological study of world art in its cultural setting from the prehistoric to the contemporary. The course is divided into 12 segments, presented as Lessons 1-12. Each lesson represents the equivalent of 4 hours of class time. The student is expected to spend a minimum of 4 additional hours to complete the assignments for each unit. Each unit must be completed before the student may advance to the next level.

ASTR 1030 Astronomy (4 credits)—*Prerequisite: There are no other college-level courses that must be taken before this one, but the student should have entry-level college reading and math skills. Some concepts of astronomy, and some laboratory exercises require the ability to understand and perform some basic algebraic manipulations. The Physics 1030 may be taken before or after this course for those students needing a two-semester science elective. The most logical sequence would be Physics and then Astronomy because some of the laws studied in Physics apply to Astronomy.* As an introduction to astronomy, this course explores what we know about the solar system and how we know what we know. Topics covered include the history of astronomy, methods of astronomy, formation of the solar system, and the physical characteristics of the sun, planets, moons, and minor members of the solar system (asteroids, meteoroids, and comets). Through the use of text, laboratory, astronomy web sites and actual observation, the student can expect to learn to identify, locate and specify location of the visible planets, some constellations and any other "visitors" that happen to show themselves in our solar system during the course.

BIOL 1010 Biology I and Lab (4 credits)—*Prerequisite(s): Students must be eligible for enrollment in English 1010 and DSM 0840 or higher.* This course introduces the student to the methods of biological science. It explores the chemical basis of life; cell structure and function including energy metabolism; cell division; DNA and gene regulation; Mendelian and molecular genetics; the process of evolution; speciation; mechanisms for the origin of life on earth; the principles of systematics; the prokaryotes and the Kingdom Protists.

BIOL 1020 Biology II and Lab (4 credits)—*Prerequisite(s): Completion of or exemption from DSPW 0800 and DSPM 0800.* This course introduces the student to the diversity of life on earth, looking in more detail at the fungi, plants and animals. The structure and function of flowering plants is reviewed. Animal anatomy (tissues, organs and organ systems), physiology, reproduction and development are covered with an emphasis on humans. The final section of the course covers the principles of ecology.

BIOL 1430 Nutrition (3 credits)—*Prerequisite: DSPW 0800, DSPR 0800 The textbooks and other materials routinely required in this course are written at college level, hence students' reading and writing skills need to be at the college level.* A study of nutrients and their relationship to human growth, development, and maintenance. Special emphasis is given to the role of foods and the nutrients they contain, with regard to the physiological, psychological, and sociological well-being of the individual. Practical analysis of food records and application of nutritional knowledge will be included.

BIOL 2010 Human Anatomy and Physiology I (4 credits)—*Prerequisites and Corequisites: Biology 2010 has no prerequisites; Biol 2010 and 2020 may not be taken in the same semester since passing Biol 2010 with a grade of D or better is a prerequisite for Biol 2020; Biology 2230 has no prerequisites and may be taken concurrently with Biol 2010 or Biol 2020; However, it is strongly recommended that students take no more than one of these courses (Biol 2010, Biol 2020 or Biol 2230) in a given semester.* This combination laboratory and lecture course consists of a study of the structure and function of the human body. Online laboratory experiences and exercises are designed to correspond with and complement the lecture material. The course will begin with a general introduction to anatomy and physiology, and then move on to cells, metabolism, tissues, basic chemistry, mitosis, osmosis, diffusion, the anatomy and physiology of the skeletal system, the integumentary system, the muscular system, and the nervous system.

BIOL 2020 Human Anatomy and Physiology II (4 credits)—***Prerequisites and Corequisites:*** *Biol 2010 and 2020 may not be taken in the same semester since passing Biol 2010 with a grade of D or better is a prerequisite for Biol 2020; Biology 2230 has no prerequisites and may be taken concurrently with Biol 2010 or Biol 2020; However, it is strongly recommended that students take no more than one of these courses (Biol 2010, Biol 2020 or Biol 2230) in a given semester.* This course involves a continuation of the study of the structure and function of the human body with online laboratory experiences that began in Anatomy and Physiology I. In this portion of the course, we will complete the study of the anatomy and physiology of the main systems of the body.

BIOL 2230 Introduction to Microbiology with Lab (4 credits)—*Prerequisites and Corequisites: Biology 2230 has no prerequisites and may be taken concurrently with Biol 2010 or Biol 2020; However, it is strongly recommended that students take no more than one of these courses (Biol 2010, Biol 2020 or Biol 2230) in a given semester.* This combination laboratory and lecture course consists of a survey of microorganisms with emphasis on morphology, growth and pathogenesis of bacteria, fungi and viruses. Human defense mechanisms against disease are emphasized. Laboratory exercises are designed to demonstrate the distribution, isolation, cultivation, identification, and control of microorganisms. The use of microorganisms in biotechnology will be examined.

BIOL 3100 General Genetics (3 credits)—*Prerequisites and Corequisites: The student must have completed BIOL 1110 and BIOL 1120 (or their equivalents) in order to have a working knowledge of basic biological concepts as well as an introduction to the topics to be covered in this course.* In this course, the student will study the basic principles of traditional transmission genetics as well as modern molecular genetics. The student will apply these principles in problem solving. The primary mode of delivery of course information will be PowerPoint presentations with an audio component. The student will be evaluated by means of homework, quizzes, examinations, submission of news items and a term paper. This course is for teachers who are seeking a Biology Add-on Endorsement ONLY. It will not substitute for required genetics courses in the Biological Sciences or related majors.

BIOL 3550 Ecology (3 credits)—*Prerequisites and Corequisites: The student must have completed BIOL 1110 and BIOL 1120 (or their equivalents) in order to have a working knowledge of basic biological concepts as well as an introduction to the topics to be covered in this course.* This course introduces the basic concepts of ecology, the study of how organisms interact with each other and with their habitat. The course begins with a review of the basics of evolution and natural selection, since many of the ideas in ecology depend on organisms attempting to maximize their fitness. It then covers, in order, the ecology of individuals, considering some aspects of both physiological and behavioral ecology; the ecology of groups of individuals, or populations; and finally, the ecology of groups of populations, or communities, and how they interact with each other. Lectures will consist primarily of PowerPoint presentations, and there will be demonstrations of important concepts using programs such as Populus. Evaluation of student progress will be done with examinations, quizzes, and homework assignments (including web-based research).

This course is for teachers who are seeking a Biology Add-on Endorsement ONLY. It will not substitute for required ecology courses in the Biological Sciences or related majors.

BIT 1150 Introduction to Microcomputers (3 credits)—*Prerequisite(s): You must have basic typing skills to produce your work in a timely fashion. You must have access to a Windows-based computer with an Internet connection, Microsoft Windows 95 or higher, Microsoft Internet Explorer browser software, a personal e-mail account, and the software used in the class (Office XP).* A course designed to introduce students to Windows and Office XP. The course will use the following packages in Office XP: Microsoft Word 2002, Microsoft Excel 2002, and Microsoft PowerPoint 2002. In addition, students will have an introductory section on computer hardware/software concepts and Windows file management.

BMGT 3600 International Management (3 credits)—*Prerequisites and Corequisites: General Management Course.* Theory and practice of Managing Across Borders - This course is about global management. It demonstrates how cultural factors influence behavior in the workplace and examines the skills needed to manage across national borders.

BMGT 3630 Human Resources Management (3 credits)—*Prerequisite(s): BMGT 351 or General Business Management Course.* Managing human capital in the new economy is a challenge all business professionals face. This course addresses that challenge by retaining its unique orientation to overall practicality and real-world application incorporating technology, teams and virtual learning methods. Practical tips and suggestions provide effective ways of dealing with problems in communication, leadership, discipline, performance appraisal, labor relations, and compensation administration.

BUS 1050 Legal Issues for the Web (3 credits)—*Prerequisites and Corequisites: Prerequisites for this course are DSPR 0800, Developmental Reading and DSPW 0700, Basic Writing or equivalent skills if the student is required to take these courses at his/her institution. The student must possess sufficient reading and writing skills to succeed in this course.* This course addresses Internet law and provides guidelines for putting existing material online, creating material specifically for the Internet, using material found on the Internet, e-commerce, and educational aspects of the Internet. Real-world examples are used to illustrate how the rules affect businesses. This is a three (3) hour course. Students will work on real case studies and will have discussions on what they feel should be the correct outcome based on the law as learned through this course.

CHEM 1010 Introduction to Chemistry I (4 credits)—*Co-requisites: While we do not feel that we over-emphasize mathematics skills in Introduction to Chemistry I, it is impossible to learn chemistry without using a variety of mathematics skills. Thus Intermediate Algebra, MATH 0850 is a co-requisite for the course as it teaches the skills you will need for this course.* Introduction to Chemistry I, CHEM 1010, is a 4 cr. hr. lecture/laboratory course intended to: Provide the necessary background for continuing on to General Chemistry; Satisfy the chemistry requirement for several career programs; and Satisfy part of the general education science requirement. The course will develop a variety of chemistry topics on an as-needed basis in order to deal with a variety of societal issues.

CHEM 1020 Introduction to Chemistry II (4 credits)—*Co-requisites: While we do not feel that we over-emphasize mathematics skills in Introduction to Chemistry II, it is impossible to learn chemistry without using mathematics skills. Thus Intermediate Algebra, MATH 0850 is a pre-requisite for the course as it teaches the skills you will need for this course.* Introduction to Chemistry II, CHEM 1020, is a 4 cr. hr. lecture/laboratory course intended to: Satisfy the chemistry requirement for several career programs; and Satisfy part of the general education science requirement. The course will develop a variety of chemistry topics on an as-needed basis in order to deal with a variety of societal issues.

CHEM 2310 Introduction to Quantitative Analysis (3 credits)—*Prerequisites and Co-requisites: Chemistry 1110 and 1120 required as prerequisites.* This course is designed provide an introduction to analytical chemistry primarily for those who intend to pursue a career in teaching high school science, or who need to establish certification for teaching chemistry in high school. Laboratory procedures, sample calculations, statistical analysis of experimental data obtained using virtual laboratory exercises will be included.

CHEM 3005 Organic Chemistry Survey (3 credits)—

CIS 113 Programming In Visual Basic (3 credits)—*Prerequisite(s): Because this is an online course in computer programming, it is important for the student to have completed a basic computer literacy course (e.g., CIS 100, BIT 1150) or receive permission of instructor, work well independently, be self-motivated, be computer savvy and feel VERY comfortable getting around on the computer (Words like FTP, bulletin board and Real Player don't sound foreign to you.), have the ability to troubleshoot their own computer problems, any computer programming experience is helpful but not necessary.* An introduction to Microsoft Visual Basic. Topics to be covered include: event-driven programming, interface design, creating menus and dialog boxes, writing event and general procedures, and using operating system services.

CIS 173 Programming in C# (3 credits)—*Prerequisites and Corequisites: Because this is an online course in computer programming, it is important for the student to: Have completed a basic computer literacy course (e.g., CIS100, BIT1150) or receive permission of instructor; Work well independently; Be self motivated; Be computer savvy and feel VERY comfortable getting around on the computer; Have the ability to troubleshoot their own computer problems; Any computer programming experience is helpful but not necessary.* An introduction to Microsoft C#. Topics to be covered include: Object-Oriented Programming, interface design, controls, decisions, creating menus and dialog boxes, looping, arrays and accessing database files.

CIS 186 Database Programming (3 credits)—*Prerequisite(s): CIS-113 Visual Basic Programming or the equivalent.* This course is designed to enable students to develop customized database applications. Subsequent to a brief survey of relational database techniques and methods, the emphasis will be on developing the necessary skills to design, create, and implement user-friendly front ends for relational databases. Using a

database engine such as Microsoft Access 2000, the course will concentrate on developing and coding procedures using VBA (Visual Basic for Applications).

CIS 191 Hardware Certification Training (3 credits)—*Prerequisite: CIS 100.* An introduction to microcomputer hardware installation, maintenance, repair and troubleshooting. Students will learn the processes and procedures for supporting microcomputer hardware in a business environment. This course is designed to assist the student to take the Comp TIA A+ hardware certification examination.

CIS 192 Software Certification Training (3 credits)—*Prerequisite: CIS 100.*An introduction to microcomputer operating system installation, configuration, upgrading, diagnosing and troubleshooting. Students will learn the processes and procedures for supporting microcomputer software in a business environment. This course is designed to assist the student to take the Comp TIA A+ software certification examination.

CIS 193 Introduction to Linus (3 credits)—*Prerequisites and Co-requisites: BIT 1150 or equivalent introductory computer class, or permission from instructor. A basic foundation in computer hardware, networking concepts, as well as familiarity with desktop and server operating systems such as Windows 2000 or Unix would be helpful. Programming experience of any type would also be an asset but is not explicitly required. This course is designed to prepare students for the COMPTIA Linux+ Certification Exam. Linux is a relatively new open source system software that is becoming increasingly popular for use on business Web Servers, email servers, application servers, and even personal desktop systems. This course is designed to prepare students to take the certification exam; however, it is not a substitute for the certification exam.*

CIS 263 Web Page Development and Design (3 credits) — *Prerequisite(s): CIS 151 Microcomputer Applications.* This course will cover the fundamental concepts of the Internet and World Wide Web, including how the Internet works, protocols and services, addressing and routing in the Internet. Students will design and create web pages using web page editing/publishing software and create and edit graphic images for web pages using image editing software. Use of simple Java applets will be covered and some basic Javascript scripts will be written for web pages.

CIS 264 Web Page Applications (3 credits)—*Prerequisites and Corequisites: Prior to taking this course, students should have a basic working knowledge of the Windows operating system, the Internet and Microsoft Front Page.* This course is the study of various applications available for the support of web pages. Topics covered will include web page multimedia design and the enhanced use of scripting. The latest techniques of web page design technology will be emphasized.

CIS 1610 Programming in C++ (3 credits)—*Prerequisite(s): The student should have some background and understanding of computing and the use of information systems in society. A prior course in a programming language such as Visual Basic or Java is useful, but not required.* An introduction to computer software concepts using C++. Algorithms, problem-solving methods, systems development and implementation methodologies are addressed. Standard programming constructs such as simple data types, assignments statements, use of subprograms, loops, conditional statements, arrays, records, classes, abstract data types, and object-oriented programming requirements analysis, modeling tools and methods for analysis and design, development of a software requirements specification document, software design guidelines and heuristics, software testing and debugging, and the development of a software design and testing document.

CJA 1100 Introduction to Criminal Justice Administration (3 credits)—Survey of the criminal justice system; philosophy and history of criminal justice agencies; analysis of the problems and needs of agencies involved in the criminal justice process; survey of professional career opportunities.

CJA 2600 Corrections (3 credits)—History of the development of corrections in Europe and America; survey of current prison conditions and operations, including pre-release, probation and parole.

CJA 3230 Police Organization and Administration (3 credits)—This course is designed to provide foundation for understanding the American law enforcement system by introducing essential elements of American law enforcement organization and practices. The main focus of the course is to examine the development of early policing and modern law enforcement system, recruitment and training process, the structure and function of the police, legal issues that affect policing, and current issues and problems in the field of law enforcement.

CMT 1010 Network, PC Communications (3 credits)—*Prerequisites and Corequisites: Prior to enrolling in this course, students should be able to use their computers and access the Internet. In addition to browsing the web, students should have a basic understanding of computers and be able to send email.* This course introduces basic concepts of PC communications, telecommunications and networking. It provides an overview of terminology & technologies used with local area networks (LANs) and wide area networks (WANs). In addition, it details processes, protocols, network design and a broad overview of the Internet.

COL 101 The College Experience Online (3 credits)—***Prerequisites and Co-requisites:*** *This course is for first-time online learners who are willing to learn. If in doubt, lets talk online.*In this course, we will study the best practices for success in college and learning online by using technology smartly, succeeding in workplace situations skillfully, using interpersonal communications respectfully, and developing self-management practices expertly.

COM 1000 Beginning HTML (3 credits)—*Prerequisites and Corequisites: Basic computing and keyboarding skills*. A beginning course in HTML, providing instruction in creating web pages. Topics include using HTML tags to format headings and text, to display images, and to create lists, links, tables, frames, and forms.

COM 1010 Basic Web Design (3 credits)—Presents the principles for planning and designing attractive and informative Web pages and Web sites. The course explores the factors that affect Web layout and design such as browser choice, screen resolution, navigation, connection speed, typography, graphics and color.

COM 1020 Basic Web Graphics (3 credits)—*Prerequisite: COM 1010, Basic Web Design.* An introductory class using a graphics program, scanner, and other digital devices to create and edit graphic images for web pages. Projects will be included to allow students to demonstrate mastery of the use of a graphics program to edit, optimize and create imagery for the Web, set up hierarchical folders/directories and implement, upload, and edit a functional Web site. This course is taught using Photoshop® CS3 and Photoshop® and Image Ready® (versions 6 - CS2), or Photoshop® Elements (versions 3 & up) and at least a basic HTML editor (Notepad or TextEdit).

COM 110 Survey of Mass Communications (3 credits)—This course is an examination of print and electronic media. Each medium is analyzed. The possible effects of the media are also examined.

COMM 3010 Integrated Corporate Communication (3 credits)—*Prerequisite: COMM 1200, COMM 1400, Junior status, or instructor approval.* Students examine important corporate communication areas such as internal communication, advertising, public relations, integrated marketing communications, and new communication technologies. The course focuses on how these areas work together to achieve organizational objectives.

COMM 3560 Intercultural Communication (3 credits)—The dynamics of the communication process as it functions in intercultural contexts; training for successful cross-cultural communication interactions.

COMM 4410 Conflict Resolution and Negotiation (3 credits)—*Prerequisites and Corequisites: Interest in conflict resolution and negotiation, junior or senior status, and a willingness to learn and apply theoretical concepts to real problems and situations.* This course is designed to introduce students to

conflict resolution and negotiation and tactics that can be effectively used in an organizational setting.

COMM 4910 Public Relations Campaigns (3 credits)—The establishment of public relations strategies and evaluations of outcomes using research-based goals.

COMP 3050 Programming Languages (3 credits)—*Prerequisites and Corequisites: It is assumed that students taking this course are already familiar with a programming language like C, C++,C#, Java or VB.NET.* In this course students will be exposed to the analysis and comparison of programming languages, their characteristics and implementation. Various concepts and principles will be discussed.

CSC 3700 Software Analysis and Design (3 credits)—*Prerequisites and Co-requisites: Proficient with programming in at least one language (C/C++/ Java) is required.* Refer to course syllabus for additional requirements. Practical and Professional Issues in Computer Science, Design of Algorithms, Foundations of Computer Science.

CSCI 3222 Database Management Systems (3 credits)—*Prerequisite(s): A prior course covering computer-literacy topics (Use of MS-Windows, use of an MS-Office application such as Word, Excel, or Front-Page) to ensure the student can focus on learning the Database topics without being distracted by also having to learn the Microsoft interface paradigm.* This course will give the student a basic overview of Relational Database Systems and Relational Database Design. The student will acquire a working knowledge of Microsoft ACCESS and the ISO standard SQL language. Students will work individually on a series of small projects, and one larger project encompassing all phases of database design and implementation.

CST 203 Data Structures (3 credits)—*Prerequisites and Corequisites: Prior to taking this course, students should have made a C or better in the CIS 1610-R50 Programming in C++.* This course covers the basic fundamental principles of Data Structures. It uses C++ as a programming language to implement a variety of data structures. As such it requires the knowledge of programming in C++ offered in the online course "CIS1610: Programming in C++". Topics will include C++ STL containers, vectors, C++ pointers, dynamic memory, STL Stacks, STL Queues, and Lists with or without iterators. User Designed classes are implemented.

CST 209 Java Programming I (3 credits)—*Prerequisite(s): Because this is an online course in computer programming, it is important for the student to: have completed a basic computer literacy course (e.g., CIS 100, BIT 1150) or receive permission of instructor, work well independently, be self-motivated, be computer savvy and feel VERY comfortable getting around on the computer (words like FTP, bulletin board, and Real Player don't sound foreign to you), and have the ability to troubleshoot their own computer problems. Any computer programming experience is helpful but not necessary. If you are unsure if this online course is for you, please contact your instructor.* This course will cover the fundamental concepts of Object-Oriented Programming using Java. Topics will include objects, classes, constructors, methods, and instance variables. User Designed classes are implemented. Arrays and Array Processing are emphasized. Graphical User Interfaces are developed using Java. Applets are explained and implemented.

CST 218 Java Programming II (3 credits)—*Prerequisites and Corequisites: Because this is the second online course in Java Programming, it is important for the student to: Have completed the first java programming course CST209-R50 with C or better or receive permission of instructor; Work well independently; Be self-motivated; Be computer savvy and feel VERY comfortable getting around on the computer (words like FTP, bulletin board and Real Player don't sound foreign to you); Have the ability to troubleshoot their own computer problems; Any computer programming experience is helpful but not necessary.* This course continues the coverage of the fundamental concepts of Object Oriented Programming that started in Java Programming I (CST209-R50). Topics will include Super Classes, Sub Classes, Polymorphism, Inheritance, Stacks, Queues, and Lists. User Designed classes are implemented.

DSPM 700 Basic Mathematics (3 credits)—*Prerequisites and Corequisites: Placement score on college entrance exam.* Basic Mathematics is a course for students whose placement and diagnostic tests indicate a need to review and strengthen basic mathematics skills. The course will consist of a study of whole numbers, fractions, decimals, exponents and order of operations, ratio and proportion, percent, measurement and the metric system, introductory statistics, and graphs. Emphasis will be placed on word problems that involve applications of the above topics. Students will learn and practice note-taking, study methods and test-taking strategies as they specifically relate to mathematics. To exit this course you must earn a minimum grade of C. The next required course would then be DSPM 0800 Elementary Algebra.

DSPM 0800 Elementary Algebra (4 credits)—*Prerequisite(s): Basic Mathematics or demonstrated proficiency on the placement examination.* Fundamentals of elementary algebra: operations on real numbers, evaluation and simplification of expressions and formulas, solution of first-degree equations, ratio and proportion, applied problems, operations on polynomials, factoring, exponents, roots, radicals, and complex numbers.

DSPM 0850 Intermediate Algebra (4 credits)—*Prerequisite(s): Completion of elementary algebra, DSPM 0800, two years of high school algebra, or recommendation of advisor.* This course is final preparation for college-level mathematics. The student learns tools of intermediate algebra through completing homework assignments, quizzes, participating in discussions, taking exams, and using outside links to tutorial sites.

DSPR 700 Basic Reading (3 credits)—*Prerequisite(s): Appropriate score on the college placement test.* Basic Reading is a course which provides a foundation in reading comprehension, critical reading, and vocabulary development. Students can expect to learn the essential components of reading comprehension including but not limited to locating main idea, supporting details, inferences, and figurative language. Course activities will include reading and writing assignments, tests and quizzes, as well as interaction on a class discussion board.

DSPR 0800 Developmental Reading (4 credits)—*Prerequisite(s): Basic Reading or appropriate score on the college placement test.* This course is designed to enable college students to become more aware of themselves as readers and to develop strategies and skills to meet the demands of college reading.

DSPS 0800 Learning Strategies (3 credits)—*Prerequisite(s): Appropriate score on college entrance test.* This course offers students an introduction to college. It emphasizes study methods and techniques for beginning students. Study strategies are suggested for reducing anxiety, improving memory and concentration, managing time, taking notes from texts and lectures, and preparing for and taking tests.

DSPW 700 Basic Writing (3 credits)—*Prerequisite(s):Placement score on college entrance exam.* This course is designed to give students the basis for writing a well-organized, cohesive paragraph with grammatically correct sentences. The emphasis is on writing as a process and applying basic mechanical skills.

DSPW 0800 Developmental Writing (4 credits)—*Prerequisite(s): Appropriate score on college entrance exam.* This course is designed to give students the basis for writing a well-organized and cohesive essay. The emphasis of the course is on writing as a process. Along with the writing process, students will learn grammar and mechanics.

ECED 1010 Introduction to Early Childhood Education (3 credits)—An introduction to the early childhood profession including an emphasis on professionalism and developmentally appropriate practice. Includes an overview of history of early education, theoretical program models, different types of early childhood programs, community resources, professional organizations, and contemporary trends and issues in programs for children ages birth to nine.

ECED 2010 Healthy and Safe Environments for Young Children (3 credits)—*Prerequisite(s): ECED 1010 or department approval.* The study of the basic principles of good health as they relate to the child in the family, child care center or family child care home, and community. This course includes child nutrition, growth, disease and accident prevention, and safety. Laboratory observation and interaction.

ECED 2015 Early Childhood Curriculum (3 credits)—A survey of the theoretical models and services available to parents and children. Laboratory observation and interaction.

ECED 2020 Infant, Toddler, Child Development (3 credits)—*Prerequisite(s): ECED 1010, 2010 and completion of all DSP requirements for reading, writing, and learning strategies or Department approval.* Infant, Toddler, Child Development is the study of the physical, social, emotional, cognitive, language and literacy development of young children, birth to age eight. This course is designed to provide a foundation for early childhood professionals and others who are interested in child development. Knowledge of all aspects of child development is the cornerstone for the implementation of best practices in early childhood programs. Child observation and fieldwork are an integral part of this class.

ECED 2030 Infant, Toddler Care (3 credits)—The study of this course includes curriculum and developmentally appropriate practices for young children. Cases studies of young children and curriculum appropriate for young children are used to reiterate the concepts that are discussed. Hands-on experiences are included in the course content.

ECED 2040 Family Dynamics and Community Involvement (3 credits)—The role of the family and community in the physical, cognitive, social, and emotional growth of the child in a diverse society. Includes benefits of and strategies for developing positive, reciprocal relationships with families in an early childhood setting ages birth to age 9.

ECED 2060 Development of Exceptional Children (3 credits)—*Prerequisite(s): ECED 2020 and 2040 or department approval.* Explores practices that early childhood professionals can apply to develop a more inclusive and accessible environment for all children ages birth to nine. Provides students with skills to include children of all abilities through appropriate arrangement of the environment. Includes strategies for developing strong relationships with families and other community agencies. Field experience is required.

ECED 2070 Developmental Assessment Methods (3 credits)—*Prerequisite(s): ECED 2020 or Department Approval.* A study of assessment for children from birth to nine years of age. Both formal and informal instruments will be discussed with the emphasis on tools that can be used by teachers of young children. Considerations in choosing, administering, and reporting results of assessments will also be addressed. Field experiences are required.

ECED 2080 Language and Literature in Early Childhood (3 credits)—*Prerequisite(s): ECED 2015 Early Childhood Curriculum (provides foundation for appropriate curriculum in early childhood programming).* The course focuses on the research-based principles and practices for language and literacy development of children age birth to nine. Emphasis is given on using a developmentally appropriate approach in teaching practices. Field experiences required.

ECED 2085 Math and Science in Early Childhood (3 credits)—*Prerequisite(s): ECED 2015 Early Childhood Curriculum.* A course on the standards, principles, and practices in teaching mathematics and science to young children ages birth to nine. An emphasis will be placed on developing an integrated math and science curriculum that includes appropriate content, processes, environment and materials, and child-centered choices. Field experiences required.

ECED 2090 Creative Development (3 credits)—This course provides strategies for promoting creative development of the child ages birth to nine. Students will gain an understanding of the concept of creativity: why it is important, and how the development of creativity in young children can be encouraged. Emphasis is on the development of creativity in relation to art, music, language, movement and dramatic arts. Field experience is required.

ECED 2120 Administration of Child Care Centers (3 credits)—A study of organization and administration practices applicable to the child care center. Topics of special consideration will include leadership, enrollment and public relations, staff management, financial management, facilities, regulations, parent relations, and program development.

ECON 2010 Economics I (3 credits)—This course is a study of basic economic concepts and macroeconomics. Topics to be covered will include basic economic theory, economic systems, national income accounting, unemployment and inflation, money and banking, fiscal and monetary policy.

ECON 2020 Economics II (3 credits)—*Prerequisite(s):*

ECON 2030 Survey of Economics (3 credits)—*Prerequisite(s):DSPM 0700, DSPR 0800, DSPW 0800.* This course is a survey of economics. It is designed as a beginning economics class. The course covers how modern economics evolved, supply and demand, national income accounting, money and banking, market structures and contemporary economic issues. Both macroeconomic and microeconomic principles are covered.

EDCI 4900 Multicultural Education (3 credits)—The purpose of this course is to aid students in becoming aware of, understanding, and being sensitive to the needs and interests of ethnic and cultural groups, with the underlying philosophy being that the differences and similarities that characterize individuals and groups should be cherished for their worth and cultivated for the benefit they bring to all people.

EDU 1100 Technology for Teachers (3 credits)—Introduction to windows and windows-based microcomputer packages including word processing, spreadsheets, presentations; Internet applications; basic PC troubleshooting; introduction to audio-visual and office equipment currently used to facilitate quality classroom instruction.

EDU 1120 Introduction to Teaching (3 credits)—An introduction to teaching and to applications of technology which will assist in efficient management and effective learning within the school environment. Experience will be gained in the development and use of instructional applications including computers and educational software.

EDU 201 Foundations of Teaching (3 credits)—*Prerequisite(s):* In this course attention will be given to the historical, philosophical, and sociological foundations underlying the development of American educational institutions. The role of the schools, the aims of education, and the role of state, local, and federal agencies will be emphasized. Some field experience will be required.

EDU 2050 Classroom Management (3 credits)—This course is an introduction to K-6 classroom management techniques. Topics include: physical space, behavioral norms, safety, time management, managing student work, and managing other special classroom needs.

EDU 250 Instructional Technology in Education (3 credits)—An introduction to applications of technology which will assist in efficient management and effective learning within the school environment. Experience will be gained in the development and use of instructional applications including computers and educational software.

EDUC 2120 Introduction to Special Education (3 credits)—*Prerequisite(s): DSPW 0800 or DSPR 0800 or equivalent skill.* A study of the characteristics and needs of children (PK-elementary level) with special needs and/or disabilities with an emphasis on legislation, programs, services and best practices in the educational setting.

ELED 4260 Teaching and Internet Technology (3 credits)—*Prerequisite(s): Junior, Senior, or Post-Baccalaureate status.* Internet technologies

connect students and teachers to innovative learning projects, multimedia-interactive information and activities, virtual classrooms and information from around the world. Students and teachers must acquire both the knowledge and technical aspects of how to integrate the Internet into their learning environments.

ENGL 1002 English as a Second Language II (3 credits)—*Prerequisite(s): EN 1001 or equivalent.* This course is designed for the non-native speaker of English who possesses a novice high-to-intermediate level of competency in spoken and written English. The course includes practice in speaking, listening, reading, and writing.

ENGL 1003 English as a Second Language III (3 credits)—*Prerequisite ENGL 1002 or equivalent.* This course is designed for the non-native speaker of English who possesses a mid-intermediate to advanced level of competency in spoken and written English. This course includes practice in speaking, listening, reading, and writing.

ENGL 1010 English Composition I (3 credits)—*Prerequisite(s): Satisfactory ACT or placement test scores.* The course is designed to give students the foundation of paragraph writing and development of essays by various rhetorical patterns; reading and discussion of selected essays, short stories, and poems; introduction to writing about literature; basic introduction to research and documentation.

ENGL 1020 English Composition II (3 credits)—*Prerequisite(s): ENGL 1010.* A composition course in argumentative writing, including invention, organization, style, and revision. Critical reading and thinking will be addressed though students' writing. Research skills and documentation will be introduced.

ENGL 2010 Introduction to Literature I: Fiction (3 credits)—*Prerequisite(s): ENGL 1010 and ENGL 1020 are prerequisites for this course. This is to ensure that the student has sufficient skills to effectively explore and develop arguments about new ideas and to communicate them in writing.* English 2010 provides the opportunity, through reading, discussion, and short projects, to analyze short stories and a novel in terms of their literary characteristics. This course is designed to give students experience in reading and interpreting literature.

ENGL 2110 American Literature: Colonial Period Through the Civil War (3 credits)—*Prerequisite(s): ENGL 1010.* Survey of American literature from the time of English colonization through the Civil War. Examines the works of significant writers of fiction, poetry, and non-fiction, taking into account the events in history that influenced them.

ENGL 2116 Writing for the Web (3 credits)—*Prerequisite(s): ENGL 1010.* This course focuses on developing comprehensible and useful content for web sites. Students critique the writing style of current web pages and then design online documentation and develop appropriate online copy.

ENGL 2120 American Literature II (3 credits)—*Prerequisite(s): Prerequisite(s): ENGL 1020.* A survey of American masterpieces from the Civil War to the present.

ENGL 2210 British Literature I (3 credits)—*Prerequisite(s): Students must have completed English 1010 and 1020 before they enroll in English 2210.*English Masterpieces I is a survey of major and minor works from the Medieval, Renaissance, and Neoclassical periods of British literature. Students will examine the fiction, poetry, drama, and nonfiction of these periods with respect to the literary forms and characteristics of each period, as well as to the societal, cultural, philosophical, and historical forces that influenced their development.

ENGL 2220 British Literature II (3 credits)—*Prerequisite(s): Students must have completed English 1010 and 1020 before they enroll in English 2210.* English Masterpieces II is a survey of major and minor works from the Romantic, Victorian, and Contemporary periods of British literature. Students will examine the fiction, poetry, drama, and nonfiction of these periods with respect to the literary forms and characteristics of each period, as well as to the societal, cultural, philosophical, and historical forces that influenced their development.

ENGL 230 Creative Writing (3 credits)—*Prerequisite(s): ENGL 1020 or permission of instructor.* An elective course in developing and revising creative writing (fiction, poetry, drama, and/or personal essay) for publication or personal satisfaction.

ENGL 2410 Western World Literature I (3 credits)—*Prerequisite(s): ENGL 1010 and ENGL 1020.* A survey of selected masterpieces of Western World literature: Ancient, Medieval, Renaissance.

ENGL 2420 Western World Literature II (3 credits)—*Prerequisite(s): Students must have completed English 1010 and 1020 before they enroll in English 2420; students may take English 2420 without having taken English 2410.* A survey of masterpieces of Western World literature: the Enlightenment, the Romantics, the Moderns, and the Post-Modern.

ENGL 2630 Literature for Children (3 credits)—*Prerequisite(s): ENGL 1010.* An historical survey of literature for children with special attention to literature for pre-school and elementary years. Genres studied include picture books, fiction, traditional literature, nonfiction, and poetry. This course transfers as Literature for Children, but not as a literature course to fulfill the general education requirement. This course is primarily intended for those majoring in Early Childhood Education or Elementary Education.

ENGL 3134 Computers, Writing, and Literature (3 credits)—*Corequisite(s): Students must have access to a recent-model PC with "24/7" Internet access, an established e-mail account, motivated, and self-directed learners.* What are the connections among computers, writing, and literature? That's the focus of this course - the implications made by the Internet and computers for writing, literacy, and uses of texts. We'll begin by examining a variety of texts available in full or in part on the Internet; then we'll proceed to the rhetorical and technical aspects of these texts; and we'll conclude with the production, in HTML, of student text resources. Format and layout of documents (whether they're prepared in HTML or as word-processed texts) are important aspects of this course, and will be considered among the graded activities and in the broader context of good writing.

ENGL 3250 Professional Communication I (3 credits)—*Prerequisite(s): ENGL 1010 and ENGL 1020.* This course is designed to introduce you to various kinds of technical and professional writing. During the course, you will become familiar with technologies of business communication, receive feedback from and provide feedback to others on writing drafts and revisions, learn about the concept of "genre" and its application to technical and professional writing, and discover the role rhetoric plays in effective technical communication. Because this course is an online course, we will learn and experience ways to communicate effectively using e-mail and the Internet, including evaluating web site design, the rhetoric of e-mail, the dynamics of online discussions, and particularly audience awareness and communication through technology. The course will go beyond writing itself to encompass graphics and ways they are used to create appropriate interfaces for communicating in computer environments. Throughout the course, rhetoric will be emphasized as an overarching concept essential for communicating in technological environments, both educational and professional.

ENGL 3290 Introduction to Film (3 credits)—*Prerequisite(s): Completion of English Composition 1010 and 1020 (or their equivalents) is required to provide students adequate writing skills.* In "Introduction to Film," the techniques and aesthetics of cinema are studied through the presentation of feature and short film. Students read selections in the text, peruse course information and contact related web sites. In addition, students independently view films illustrating certain techniques and aesthetics that are to be chosen from a list of selected films for that purpose. As there is no central viewing area, students are expected to locate films on their own (video stores, public libraries, university media centers, various online

rental or purchase sites) and view them. The list of films ranges from classic examples of the technique or aesthetic under consideration to more modern variations or modifications of it, and is designed to aid students who may not have access to classic films.

ENGL 4100 Writing in Professions (3 credits)—*Prerequisite(s):* ***Writing:*** *Your instructor assumes that you have mastered basic writing skills, through composition courses and/or practical experience. Students must demonstrate, in each assignment, their abilities in this area.* ***The Internet:*** *You must begin the course with basic Internet browsing abilities, and you must have access to either Netscape or Internet Explorer browsing software.* ***HTML and Web Page Production:*** *Your instructor will provide tutorials in HTML writing with Netscape Composer and Microsoft FrontPage. You will not receive instruction in writing text documents in HTML code. Though you should have one of these programs installed on your computer (Netscape Composer is available, free of charge, as part of the Netscape browser package), you may use other HTML-creation software (or write the code yourself) if you are more comfortable with this approach. If you do not have Netscape on your computer you should install it immediately — your HTML materials (web pages, etc.) will be examined via this software.* ***Word Processing:*** *You MUST have Microsoft Word, or the ability to save and send documents in Microsoft Word format, and you are expected to know how to use this software. Your word processed documents will be examined via this software. You may NOT submit documents in WordPerfect or other word processing software (unless you can "Save As" an MS Word document). The instructor will assign a failing grade to documents submitted in incorrect word processing or HTML formats. This is NOT negotiable.*How does writing for the Internet and electronic media differ from "hard copy" writing? In this course, we will explore this issue through four Modules, increasingly interactive, designed to expose you to the basic elements of this new and growing field. Like most Internet writers, you will begin in isolation; in Module I you will produce an electronic resume, focusing on both content and presentation. Module II is an exercise in standard electronic technical writing; you will produce a Proposal/Report for dissemination over the Internet, and you will collaborate with your classmates to improve both their writing and yours. Module III is a Research Project, combining collaborative work with independent Internet research writing and feedback. Module IV, the eJournal article, represents the heights to which many Internet writers aspire; you will convert your research project (from Module III) into an eJournal article, adding images and paying close attention to the details of presentation (including screen resolution, audience, and purpose).

ENGL 4680 Continental Literature (3 credits)—*Prerequisite(s): As this is an advanced level English course, students should complete required Freshman and Sophomore required English courses prior to enrolling in this course. Students who are not sure as to whether or not they should take this course should consult with their advisors.* Our primary focus this semester in this course will be on literature not as a knowledge base, but as a skill. In particular, we will be examining texts from the perspective of semiotics which is a discipline that is concerned not with "what some thing means", but why things mean and how things mean. As we will be dealing with literatures from multiple language and literary traditions, our focus will be on the common human element as opposed to cultural ideas. The one common element which humanity possesses as a species is its body; thus, we will look at the way in which our sense of body effects our sense of meaning.

ENGL 4700 Chaucer and Medieval Literature (3 credits)—*Prerequisite(s): As this is an advanced level English course, students should complete required Freshman and Sophomore required English courses prior to enrolling in this course. Students who are not sure as to whether or not they should take this course should consult with their advisors.* The primary focus in this class is really on literatures not often encountered which affords us the luxury of not focusing on a strong existing canon which would over-shadow other literatures. Additionally, we can test various critical hypotheses while working from a literary basis other than that from which those hypotheses were developed. In short, over the course of this semester, we will approach a large number of texts from a large number of cultures from a variety of perspectives.

ENTC 3030 Technical Communication (3 credits)—*Prerequisite(s): ENGL 1010 and 1020. These prerequisites ensure that the student has the proper writing experience in order to be sucessful in this class.* A comprehensive study of technical and professional communication in written and oral form. Covers rhetorical principles and their application in a variety of types of business correspondence, reports, and technical/scientific documents.

ESC 1110 Introduction to Environmental Studies I (4 credits)—*Prerequisite(s): College Level in Math, English, Reading.* Study of environmental problems at global, national, and local levels. Ecological principles, geophysical processes, and human population dynamics; scientific approach applied to understanding environmental concepts using hands-on field experiences.

ESC 1120 Introduction to Environmental Studies II (4 credits)—*Prerequisite(s): The student must be at college level in Math, English, and Reading.* Study of environmental problems at global, national, and local levels; soil, water, and mineral resources, food resources and pesticides, hazardous wastes and air pollution, energy, land, and species resources; laboratory emphasis on local field experiences.

ET 3910 Introduction to Operations Management (3 credits)—A foundation course in manufacturing and service operations management. Problem-solving applications are emphasized. Students will learn the basics of both traditional and modern topics in a global marketplace stressing the competitive dimensions of QCD (quality, cost, and delivery/flexibility). Group interaction on assignments is encouraged.

FREN 1010 Beginning French I (3 credits)—Introduction to the French language and to the culture, geography, and history of French-speaking countries.

FREN 1020 Beginning French II (3 credits)—*Prerequisite: A grade of at least a C- in FREN 1010, credit received from CLEP exam, or with consent of the coordinator for French*. Introduction to the French language and to the culture, geography, and history of French-speaking countries.

GEOG 105 World Regional Geography (3 credits)

GEOG 3710 Geography of U.S. (3 credits)

HIST 1110 World History and Civilization to 1500 (3 credits)—A general survey of the cultural, religious, political, and social development of major world civilizations from their beginnings to c. 1500.

HIST 1120 World History and Civilizations Since 1500 (3 credits)—A general survey of the cultural, religious, political, and social development of major world civilizations from 1500 to the present.

HIST 2010 American History I (U.S.) (3 credits)—*Prerequisite(s): DSPW 0800 and DSPR 0800; or appropriate entrance test scores.* Students must read and write at a level to be expected from a college freshman. This course is an examination of the social, political, economic, and intellectual history of the United States from the colonial period to 1877. Each student's success in attaining course objectives will determine her/his grade. Critical essays either in exams or written assignments will measure for the instructor the students' progress toward these objectives. Students also must participate in group discussions.

HIST 2020 American History II (U.S.) (3 credits)—*Prerequisite(s): HIST 2010.* This course covers American civilization from the end of Reconstruction to the recent past. The course seeks to give students a perspective on the position of the United States among the nations of the world and on the controversies and agreements among Americans concerning the desired attributes of their culture, government, and ideals. The course will focus on central themes and issues in the development of American society and institutions. It will raise questions about human values, economic growth, institutional change, cultural development, political democracy, and the place of the United States in the world.

Themes that we will address in this course include: industrialization and its effects on American society, economy, and political processes; immigration, urbanization, and the changing demographics of the United States; Progressivism and the struggle for social justice; change and continuity in the U.S. foreign policy; World War I; social changes in the 1920s; the Great Depression and the New Deal; World War II; post-war affluence and social change including the Cold War, anti-communism, and civil rights; the Vietnam War and the Great Society; and the political realignment of the Reagan years and other historically recent events.

HIST 2030 Tennessee History (3 credits)—*Prerequisite(s): The student should be able to read and write at college level and navigate on the web.* A survey of the geographical background, peoples, political life, and economic and social development of the state. This development is traced from the earliest beginning of the state to the present.

HIST 2050 Appalachian History (3 credits)—Examines the theme of continuity and change in the Southern and Central Appalachian region from colonial times to present. States included in this study are western Virginia, eastern Kentucky, western North Carolina, eastern Tennessee, northern Georgia, northern Alabama, and southern West Virginia. F,S

HIST 220 African American History (3 credits)—*Prerequisite(s): DSPW 0800 and DSPR 0800 or acceptable placement scores.* This course will examine the history of Africans and their descendants in the United States from the end of the Civil War to the present, investigating topics from emancipation to the ongoing struggle for Civil Rights. Connections between this history and the issues and concerns facing all Americans in the present will be explored. The course may be used as a Social Science elective.

HIST 3035 Technology and Culture in American History (3 credits)—*Prerequisite(s): Completion of History 2010 and/or 2020 is strongly suggested, but not required.* This course describes and analyzes the history of technology in the United States from the colonial period to the present. It focuses both on the "nuts and bolts" of technology and the interrelationship of technology, culture and society. Technological change is a social process, both affecting and affected by the society in which it takes place, and this course will explore this process, noting the influence of technology on households, businesses, government, and other institutions, and how these institutions shaped technolgies and technological development during that last 300 years of American history.

HIST 3121 England Before 1714 (3 credits)—The course traces the history of England from the Anglo-Saxon invasions of the fifth and sixth centuries to the political, religious, and cultural consensus and new economic order achieved in the early eighteenth century. As befits a survey, the course will examine political, cultural, and socio-economic trends, emphasizing those developments which help explain the distinctive liberalism and individualism of English culture, such as the breakdown of feudalism, the Reformation and its Puritan offshoot, the emergence of the common law, and the rise of Parliament.

HIST 3811 U.S. Military and Naval History (3 credits)—*Prerequisite(s): Completion of History 2010 and 2020 is suggested, but not required.* This course describes and analyzes the history of American military policy from the colonial period to the present. It focuses on the creation of American military institutions, the genesis of policy-making, the maintenance of civilian control over the military, the conduct of war, the interrelationship between foreign policy and military policy, and the influence of American society upon the armed forces as social institutions.

HIST 3880 Renaissance and Reform Europe (3 credits)

HIST 4670 Civil War and Reconstruction (3 credits)—*Prerequisite(s): There are not any prerequisites, but completion of History 2010 is recommended.* This course is a study of the events leading to the sectional crisis that resulted in the Civil War (1861-1865), the four years of war, and Reconstruction through 1877. Students will examine the development of the Southern plantation-based economy in contrast to the industrialized North, and the contest for national power as the United States expanded west adding new territories and states during the antebellum years. Major attention is given to the struggle over the issue of the expansion of slavery into these new lands. The social, economic, cultural, political, and military aspects of the struggle are studied in order to gain an analytical understanding of the causes, course and results of the war and its impact on the changing roles of all Americans including the changing roles of women and blacks in American society. The course examines the impact of the Emancipation Proclamation and subsequent freedom for African Americans (via the 13th, 14th, and 15th Amendments to the U.S. Constitution) up to the removal of Federal troops from the South in 1877.

HIT 1010 Medical Terminology (3 credits)—*Prerequisite(s): DSMR 0800 Developmental Reading; Corequisites: DSPM 0850 Developmental math and DSPS 0800 study skills.* A study of the language of medicine with emphasis on body systems, prefixes, suffixes, root terms, pronunciation and spelling.

HIT 1011 Fundamentals of Health Information Technology (3 credits)—*Prerequisite(s): DSPW 0700, DSPR 0700.* This course is designed to introduce students to the principles of health information technology. The development, content and management of the medical record will be explored as well as a basic overview of the health care delivery system. Emphasis is placed on hospital and medical staff organization; patient record content; procedures in filing; numbering and retention of patient records; quantitative analysis; release of patient information; forms control and design; indexes and registers; regulatory and accrediting agencies; and the transition to an electronic health record.

HIT 2110 Management and Supervision in Health Information (3 credits)—*Prerequisite(s): Admission to program or permission of program director.* A study of supervisory and management functions with focus on planning, organizing, staffing, directing, and controlling in health care organizations. Special emphasis will study managerial techniques to supervise, motivate, counsel, lead, train, and communicate with staff in health information services.

HIT 2120 Health Care Statistics and Reporting (3 credits)—*Prerequisite(s): DSPRXXX All developmental study courses (if required based on ACT scores or COMPASS test); COLLXXX Computer Literacy Class; HIT1010 Medical Terminology; HIT1011 Introduction to Health Information Technology; BIOL2010 Anatomy and Physiology I and Lab; BIOL2011 Anatomy and Physiology II and Lab.* This course instructs students in health data collection, commonly used health care statistical computations and interpretation, presentation and reporting of data, indices, databases and registries along with statistics computed for daily operations of the health information management department. This course also includes basic research principles along with purpose of Institutional Review Board and its role in research.

HIT 2130 Coding and Classifying Systems II (3 credits)—*Prerequisite(s): All developmental study courses (if required based on ACT scores or COMPASS test) COLL1020 Technology Essentials (or higher level computer class) HIT1130 Coding and Classification Systems I.* This course covers the basic principles of coding with Current Procedural Terminology (CPT) coding system including structure and rules. Instruction will also be given in use of HCPCS Level II coding including structure and rules. The use of these coding systems will be studied as they are used in reporting of reimbursable medical services and procedures performed by physicians.

HIT 2140 Professional Practice I (3 credits)—*Prerequisite(s): HIT 1110, HIT 1130, Admission to the HIT Program.* Emphasis is placed on providing opportunities for students to relate classroom theory to actual functions of health information, such as assembly and record analysis; medicolegal procedures; information retention; filing and retrieval; and

the use of technology. Students will meet objectives through assignment to a health care facility or through the use of virtual simulation projects.

HMSE 1100 Concepts of Fitness and Wellness (3 credits)— Stressing individual responsibility for achieving optimal well-being, this course emphasizes preventive health practices which promote healthful lifestyles and reduce risk factors associated with disease.

HPRO 2100 Wellness Concepts and Practices (3 credits)— Stressing individual responsibility for achieving optimal well-being, this course emphasizes preventive health practices which promote healthful lifestyles and reduce risk factors associated with disease.

HPSS 3550 Principles of Sports Fitness (3 credits)—Principles of Sports Fitness provides an opportunity for students to learn the concepts and principles essential for an understanding of how to improve physical fitness for participation in sports. Specific activities with step-by-step instructions and procedures may be used to ensure that students learn how to identify, assess, and improve basic components of fitness (flexibility, cardio-respiratory endurance, strength, and body fat composition). Emphasis is placed on the ability of students to utilize the principles of readiness, adaptation, progressive overload, specificity, and reversibility, to design and manage a personalized fitness-training program. Appropriate individual and group activities are included in this course to afford opportunities for students to share their ideas and experiences in a manner that will facilitate the learning process. This course is designed for health fitness professionals, physical education teachers, coaches, and other individuals who desire to know how to plan and manage fitness-training programs.

HSC 190 Introduction to Human Pathophysiology (3 credits)— *Prerequisite(s):* A course designed to offer seminars, workshops, and other training specific to the interests of nursing and allied health students.

HTL 110 Introduction to Hospitality Industry (3 credits)— *Prerequisite(s): None, however basic reading, writing, computer skills and study skills are necessary.* This course provides a basic understanding of the lodging and food service industry by tracing the industry's growth and development, reviewing the organization of hotel and food and beverage operations, and by focusing on industry opportunities and future trends.

HUM 1010 Introduction to Humanities I (3 credits)—Historical approach to pivotal ideas, systems of thought, and creations of the Western world (e.g., music, drama, painting, sculpture, architecture, and literature) as reflections of the culture that produced them.

INFS 1150 Introduction to Micro Comp App (3 credits)—This course introduces the student to the use, capabilities, and limitations of microcomputer applications. Students study the terminology and concepts involved with the hardware operating system Windows environment, and microcomputer applications software. A fundamental study of the Windows environment and its interaction with hardware and software is covered. The Internet and word processing within the Windows environment are introduced. Keyboarding skills are required for this course.

INFS 3700 Introduction to Systems Analysis and Design (3 credits)—*Prerequisite(s)/Corequisite(s): Working knowledge of some type of graphic tool (i.e. PowerPoint). This will be used for any type modeling done in the course. Management of Information Technology (PTMA 3020).* This course will provide the students with the basics of information systems components and vocabulary. In this course, students will explore and become familiar with various concepts, principles, and stages of computer-based information systems analysis and design. Students will be exposed to and learn about the groups of people involved in systems development and the different methods, tools, and techniques used in systems analysis and design. Feasibility study, requirements definition and design and development documentation will be covered. The system development life cycle, prototyping, data modeling, and user involvement will also be covered.

INFS 4900 Seminar in Data Communication (3 credits)— Introduction to business data communications terminology and concepts to include the examination of data communication topologies; network design and management; data communication hardware, software, and standards; the Internet; and e-business applications.

INTC 1050 Computer Graphics and Animation (3 credits)— *Prerequisite(s): Introduction to Computers or equivalent.* A course designed to introduce the concepts of computer graphics creation. The course will use the software Ulead PhotoImpact 7.0. This course is designed to teach computer graphics creation to students with no prior graphics background.

JOUR 3400 Introduction to Public Relations (3 credits)— Introduction to Public Relations is a survey of the public relations discipline including the professional foundation of ethics, law, and theory as well as the process, audiences, and professional practice areas. As a student in this course you can expect to learn this foundation allowing you to move on through more advanced professional practice courses in public relations; however, with this foundation you should have good understanding of the discipline, why it is important, and how to do basic public relations functions.

JOUR 3410 Public Relations Research (3 credits)—This online course is designed to equip students to perform and supervise preliminary and detailed research and manage environmental assessment in contemporary public relations practice. It fulfills the requirement for an upper level "computation intensive" course.

JOUR 3421 Public Relations Writing (3 credits)—This writing-intensive course includes components of knowledge and skills. You will learn about organizations, publics, the media and how to prepare public relations messages for print and electronic media.

JOUR 4420 Magazine Editing and Prod (3 credits)—*Prerequisite(s): JOUR 3400.* Case studies and typical public relations problems; planning and preparation of communications materials for various media; application of public relations techniques.

JOUR 4712 Mass Media and Cultures (3 credits)—*Prerequisite(s):A Junior standing. This is a writing-intensive course and presupposes some familiarity with the journalism profession.* Mass Media and Cultures is designed to orient future professional communicators to the challenges and opportunities involved in understanding and communicating with people of different cultures, both domestically and internationally. For the professional journalist, public relations practitioner, and advertising executive, such communication is crucial, as the world becomes more of a global village every day. Even if one never leaves the shores of the United States, he or she will find it necessary and inevitable to communicate with members of different cultural, racial and ethnic backgrounds every day of the week in his/her professional world. Each culture communicates differently. Some of these differences are minor and subtle; others are major (both subtle and obvious).

LDSP 3000 Leadership Development (3 credits)—This course is designed to increase your knowledge base about the study of leadership, and to enhance your leadership skills through the review of leadership principles and theories, the assessment of leaders in action, and through the examination of effective leadership skills.

LIST 4093 Special Topics in Leadership (3 credits)—Every arena in our society has leaders. There are leaders in business, government, education, non-profit organizations, religious institutions, etc. Despite the prevalence of leadership in our everyday lives, we rarely think of leadership in systematic or cross-disciplinary ways (for example, through the lens of social science or cutting across disciplinary boundaries).

MATH 1130 College Algebra (3 credits)—*Prerequisite(s): Two years of high school algebra and an acceptable placement score or DSPM 0850.* A course designed primarily for students majoring in non-science degrees. Topics include functions and graphs, linear and quadratic equations, inequalities,

polynomials, rational expressions, exponents, radicals, systems of equations and exponential and logarithmic functions.

MATH 1410 Number Concepts/Algebra (3 credits)—*Prerequisite(s): Documented eligibility for collegiate mathematics; one high school credit each in algebra I, algebra II, and geometry. Students who are subject to A89 admission requirements who do not have a high school credit in geometry must successfully complete MATH 0990 prior to enrollment in MATH 1410.* This course is a conceptual approach to the study of the properties of number sets within the real number system. Topics include tools for problem solving, sets, functions, logic, numeration systems, properties of and operations with whole numbers, integers, rational numbers and real numbers. Successful completion of an Arithmetic Proficiency Test is required. Students will participate in discussions and submit projects as well as Internet assignments and activity critiques.

MATH 1420 Logic/Problems/Geometry (3 credits)—*Prerequisite(s): Documented eligibility for collegiate mathematics; one high school credit each in algebra I, algebra II, and geometry. Students who are subject to A89 admission requirements who do not have a high school credit in geometry must successfully complete MAT 0990 prior to enrollment in MATH 1420.* This course is a conceptual approach to the study of geometry. Topics include measurement, congruence, similarity, and graphing; constructions, theorems, and proofs in both non-coordinate and Cartesian settings; historical development of geometry as a tool. Students will participate in discussions and submit projects as part of the course.

MATH 1530 Probability and Statistics (3 credits)—*Prerequisite(s): Two years of high school algebra and an acceptable placement score or DSPM 0850.* An introduction to elementary methods and techniques. Topics include sampling, frequency distributions, elementary probability, discrete and continuous probability distributions, interval estimation, hypothesis testing, and simple correlation. Intended primarily for business majors.

MATH 1630 Finite Mathematics (3 credits)—*Prerequisite(s): Two years of high school algebra and an acceptable placement score or DSPM 0850.* This introduction to finite mathematics is intended for students studying Information Systems, Computer Network Technology, and Business Management. This course is also intended to fulfill the general education mathematics requirement for other degree areas. Topics covered include linear equations and systems, matrices, linear programming, finance, set theory, counting methods, probability, and logic.

MATH 1710 Precalculus I (Algebra) (3 credits)—*Prerequisite(s): Two years of high school algebra and an acceptable placement score into collegiate mathematics or successful completion of DSPM 0850.* This course is a study of the algebra necessary to prepare students for Calculus. Topics covered will include polynomial, rational, exponential, and logarithmic functions; systems of equations and inequalities; matrices and determinants; the binomial theorem; and an introduction to sequences and series.

MATH 1720 Precalculus II (Trigonometry) (3 credits)—*Prerequisite(s): MATH 1710 with a grade of C or better and an acceptable placement score. MATH 1130 will not substitute for the MATH 1710 prerequisite.* Designed as a course for students who plan to major in mathematics and/or science and are not prepared to take calculus. Topics include the trigonometric functions of the acute and general angle, applications of right triangles, identities, related angles and the reduction formula, radian measure, graphs and graphical methods of the trigonometric functions, applications, inverse trigonometric functions, and complex numbers.

MATH 1830 Intuitive Calculus (3 credits)—*Prerequisite(s): MATH 1130 with a grade of C or better. This prerequisite is necessary to assure the student has the algebra skills necessary for successful completion of the course.* Limits, continuity, differentiation, integration, and applications. This course will not substitute for MATH 1910. Intended primarily for business majors.

MATH 1910 Calculus I (4 credits)—*Prerequisite(s): Documented eligibility for collegiate mathematics; high school credits in college preparatory mathematics to include Algebra I, Algebra II, geometry, and trigonometry or MATH 1710 and MATH 1720 or equivalent.* This course is a study of differential calculus with an introduction to integration. Topics covered will include plane analytical geometry, limits, continuity, and the derivative and integral of functions of one variable with applications.

MATH 1920 Calculus II (4 credits)—*Prerequisite(s): A grade of C or better in Math 1910.* This course is a study of integral calculus, parametric equations and series. Compared with Math 1910, this course offers a more indepth concentration into integration techniques (anti-derivatives, definite integrals, and their applications). Topics covered will include inverse functions, techniques and applications of integration, an introduction into the modeling and techniques for solving simple first order differential equations, the study of parametric equations as well as the polar coordinate system and its use, conic sections, sequences and series to include conditions and tests for convergence.

MATH 2010 Linear Algebra (3 credits)—*Prerequisite(s): Math 1910 and Math 1920.* Introduction to Linear Algebra is a first course in matrix theory. Students will learn about basic matrix operations and definitions. The course will be problem-oriented with tests and quizzes measuring understanding of vocabulary as well as applications.

MATH 2810 Discrete Structure and Reasoning (3 credits)—*Prerequisite(s): Math 1910, Math 1920, and a course in Linear Algebra or Matrix Theory.* This course uses set theory and logic, along with basic discrete structures, to develop skills in mathematical reasoning and applications. Number theory, modular arithmetic functions, matrices and graphs are used to develop skills in reading and writing formal proofs, invalidating arugments, and discovering counterexamples.

MATH 3810 College Geometry (3 credits)

MDT 2100 Photoshop Essentials (3 credits)—*Prerequisite(s): Proficiency with 35mm camera. Familiarity with a personal computer, creating and saving documents, document formats. Basic knowledge of HTML, web graphics, and web design or COMN 1000, COMN 1010, and COMN 1020.* Students are introduced to the digital darkroom using Adobe Photoshop® and Image Ready® with images from film and flatbed scanners, digital cameras, and other media. Topics covered include: selecting, layers, color correction, color theory, retouching, special effects, rollovers, animation, slicing, type effects, and using Photoshop® as a design tool. Documents created in class will be optimized for web, print, and multimedia uses. Students will complete a variety of tutorials as well as create personal projects.

METH 4381 Principles of Supervision (3 credits)—*Prerequisite(s): The student should have at least Junior class standing.* The Bulletin description for this course is: Functions of Supervisory Personnel. This course is designed to provide the student with an overview of supervisory and management functions and the factors which must be considered in a supervisory or managerial position. Course activities will include such things as discussion group projects and case studies.

MGMT 3030 Management Service Organization (3 credits)—*Prerequisite(s): Management and Organization Behavior, College Algebra, Word Processing (e.g. MS Word), Presentation Software (e.g. PowerPoint), and Spreadsheet (e.g. Excel).* Decision making in service operations such as health care and delivery, food/restaurant, hotel/motel, banking and finance, transportation, leisure, and government. Both conceptual framework and application of management techniques to problems peculiar to service organizations.

MGMT 3220 Management Information System (3 credits)—*Prerequisite(s): Junior or senior status with basic computer skills.* Integrates topics of management and organization theory, information and communication theory, and systems theory relevant to managing an organization's

information resources. Includes computer hardware and software, telecommunications, and database concepts and emphasizes the e-commerce and Internet-based business models to get a competitiveness of global-based business environments. This course meets the requirements for a Technology-Intensive course.

MGMT 3610 Principles of Management and Organizational Behavior (3 credits)—*Prerequisite(s): Junior status.* This is the introductory course in management. The course is designed to provide students an overview of the management function and its role in organizations and society.

MGMT 4547 Corporate Etiquette (3 credits)—*Prerequisite(s): Junior or Senior standing.* Students will benefit the most when taking this course within two semesters of graduation. To learn skills which will help in obtaining a job, advancing to a higher position, making career changes, and practicing professional conduct on the job. Topics include communications, appropriate business attire, resume writing, interviewing, wining and dining in corporate America, international business customs, and up-to-date business etiquette. Student will learn how to handle business situations that will lead into the 21st century. Activities include time log analysis, cover letter and resume development, mock interviews, human resources interviews, and international business projects.

MKT 2450 E-Commerce (3 credits)—This course is designed to provide in-depth coverage of electronic commerce concepts. The learner will participate in a variety of activities designed to provide familiarity with the tools and issues associated with a web-delivered commercial enterprise. The learner will plan, design, develop and test web environments designed to meet secure retail and organizational needs.

MUS 1030 Music Appreciation (3 credits)—An introduction to the basic elements of music combined with a survey of Western music.

NURS 1030 Fundamentals of Nursing I (3 credits)—*Prerequisite(s): Admission to nursing major or permission of department.* This course introduces the philosophy and central competencies of the Associate of Applied Science in Nursing. The central competencies flow from the philosophy and organizational framework and are the basis for theory skills, and clinical experiences. The focus is on nursing as a discipline; the nursing process; the person as a psychosocial, spiritual, cultural being; health promotion; environmental safety; and communication.

NURS 1040 Fundamentals of Nursing II (3 credits)—*Prerequisite(s): Admission to nursing major or permission of department. Corequisite: NURS 1041.* This course is a continuation of Fundamentals I, which builds on the central competencies of the nursing program. The student is introduced to essential life functions including: protective, comfort/rest, activity/mobility; nutrition, elimination, fluid/gas transport. The focus is on nursing, the nursing process with emphasis on assessment, the client with normal or variations of normal functions, health promotion, environment, and communication. Basic management principles are introduced to assist the student to organize client care.

NURS 1041 Fundamentals of Nursing II Clinicals (2 credits)—*Prerequisite(s): Admission to nursing major or permission of department. Corequisite: NURS 1040.* This clinical course is an extension of Fundamentals I and Fundamentals II, which continues to build on the central competencies of the nursing program. The focus remains on nursing, the nursing process with emphasis on assessment, the client with normal or variations of normal life functions, health promotion, environment, and communication in a variety of clinical settings. Basic management principles are applied to client care.

NURS 1050 Medical-Surgical Nursing I (3 credits)—*Prerequisite(s): NURS 1030, 1040, 1041. Corequisite: NURS 1051.* With a continued emphasis on assessment, the focus of this course is on planning, implementing and evaluating strategies to promote, maintain and restore optimum health for diverse clients across the lifespan experiencing alterations in life function(s). The course evolves around nursing, nursing process, and clients experiencing alterations in specified life functions: protective, fluid/gas transport, elimination, nutrition/metabolism and growth and development. Management principles and therapeutic communication are incorporated into the plan of care for clients experiencing alterations in life functions.

NURS 1051 Medical-Surgical Nursing I Clinical (2 credits)—*Prerequisite(s): NURS 1030, 1040, 1041. Corequisite: NURS 1050.* The clinical course operationalizes the development and implementation of plan(s) of care to promote, maintain and restore optimum health for diverse clients experiencing alterations in specified life function(s); protective, fluid/gas transport, elimination, nutrition/metabolism and growth and development. The student will apply management principles and use therapeutic communication while providing care to client(s) in a variety of clinical settings: acute care, ambulatory and community-based settings.

NURS 1060 Mental Health Nursing (3 credits)—*Prerequisite(s): NURS 1050/1051. Corequisite: NURS 1061.* This course applies the nursing process to promote, maintain and restore optimum health for diverse clients experiencing alterations and variations in psychosocial-cultural life functions. The course is structured around eight core competencies applied to clients with mental health. Emphasis is on health promotion, therapeutic communication and legal-ethical aspects of mental health nursing.

NURS 1061 Mental Health Nursing Clinical (1 credit)—*Prerequisite(s): NURS 1050/1051. Corequisite: NURS 1060.* This clinical course focuses on care of the client across the lifespan with variations and alterations in mental health issues. The core competencies fl ow from the philosophy and organizational framework and are the basis for skills and clinical competencies. The nursing process will be applied to client care in inpatient and outpatient settings, focusing on health promotion, therapeutic communication, caring interventions and the legal/ethical aspects of mental health nursing.

NURS 4210 Health Care Research (3 credits)

NURS 4211 Nursing Leadership and Management (3 credits)

NURS 4212 Trends/Issues in Nursing and Health Care (3 credits)

ORCO 3240 Organizational Communication (3 credits)—This course is an introduction to communication in organizations including relevant theories, technologies, leadership, teamwork, diversity, global organizations, and ethics. You participate in class discussion of chapter material and write five papers based on readings and your own experiences.

PADM 3601 Introduction to Public Administration (3 credits)—*Prerequisite(s): There are no formal prerequisites for this course, however, it is strongly recommended that students have completed a freshman-level course in American Government.* Set within the context of contemporary political, social, economic, and administrative realities, this introductory course in public administration explores responsive, equitable, effective, efficient, and accountable governance processes, public policies, and institutional-base programs. It examines, from a multidisciplinary perspective, those essential competencies, values, and issues important to public service organizations and the importance of public policy at the local, state, national, and international levels.

PADM 4226 Introduction to Nonprofits Organization (3 credits)—Historically, private nonprofit institutions have served as mechanisms for citizen participation, social responsibility, and collective action in the resolution of societal problems. From social service agencies, foundations and churches to museums, schools, and professional associations, the nonprofit sector includes a diverse array of organizations, all chartered with a particular public or collective purpose. This course introduces the nonprofit sector of organizations and the role(s) it plays in society.

PADM 4401 Comparative Public Administration (3 credits)—*Prerequisite(s): Although not a requirement for this course, the successful completion of an introductory course in public administration and/or comparative politics would be beneficial.* This introductory level course examines a range of contemporary topics and issues through the lens of a comparative study of differing concepts and perspectives of public administration. Imbedded in the organization and focus of this course is a concerted effort to overcome notions that American administrative structures and approaches reflect the ideal type of contemporary administrative style.

PHIL 1030 Introduction to Philosophy (3 credits)—*Prerequisite(s): No prerequisites except the ability to read and write at a college level; and to enjoy a sense of curiosity about life. Students who are unfamiliar with the Internet and/or computers will want to spend some time before class starts getting to know the basics.* This is a general introductory course designed to familiarize the student with the basics of philosophical inquiry. In this course we will discuss the "big" questions of life while looking at some of the answers the great philosophers of the Western tradition have devised. These discussions will take place in two formats, the Cohort and the General Discussion. Cohort Discussions are small group discussions that take place with minimal teacher interaction: it is here where students can interact with one another in a more informal way just as they might discuss important ideas in a coffeeshop or a dormitory or in the hallway between classes. General Discussions are more formal full-class discussions in which the teacher actively interacts with the students' arguments as would occur in a formal land-based classroom setting.

PHIL 121 Elementary Ethics (3 credits)—Morality is tentatively defined as those rules that tell us what is good or bad, right or wrong. They govern our behavior. Ethics is tentatively defined as the rational justification of our moral rules. These definitions will be refined as the course progresses. This course, Elementary Ethics, is a critical analysis of the principle ethical theories and their applications to contemporary moral issues.

PHIL 201 Introduction to World Religions (3 credits)—*Prerequisite(s): There are no prerequisites or corequisites for this course. However, a previous course in world history or philosophy would be helpful.* PHIL 201 is a survey of the development of religions from tribal cultures to present-day societies. This course provides the student with a general knowledge of the major religions that exist in the world today as well as an understanding of their origins, development, and adaptation to present-day social and political situations. In addition to these major religions, this course will provide an insight into past religions and spiritual thinking and analyze how they influenced religious thoughts that persist to this day.

PHYS 1030 Introduction to Physics Survey (4 credits)—*Prerequisite(s): The student should have a knowledge of basic algebra to the degree that he/she can solve simple literal equations.* This is a one-semester introductory physics course for non-science and non-engineering majors. Emphasis is placed on understanding the nature of physics and applying basic physics concepts in one's everyday life experience and work. The use of mathematics is limited to basic algebraic manipulations required to understand and apply physics concepts. Topics covered include mechanical motion, energy, temperature and heat, fluids, electricity, magnetism, and wave motion. Four hours lecture and four hours laboratory.

PISI 435 International Law (3 credits)—*Prerequisite(s): There are no prerequisites for this course. It would be beneficial if students had some background in international relations but this is not a requirement for enrolling in the class. Those students who have not taken any international relations classes should inform the instructor and will receive a short list of supplemental reading materials.* This course introduces the student to the basic legal concepts and principles governing state behavior in the international order, the nature and sources of international law, international agreements, sovereignty of states, and recognition of statehood, jurisdiction, immunities, and responsibility. Current events in the international system are also examined with an international law perspective.

PM 4120 Organizational Theory and Behavior (3 credits)—This course is designed to expose the student to the fundamental principles with which to understand human behavior inside public organizations. The course examines various theories developed in an attempt to explain and predict employee behavior in an organizational context.

POL 1010 U.S. Government and Politics (3 credits)— This course offers an introduction to U.S. government and politics, focusing on citizen participation and governmental institutions.

POL 1020 Introduction to Political Science (3 credits)—Analysis of politics and political systems in various countries. Students will acquire a general understanding of the key concepts and ideas upon which different systems of government are based.

POLI 4230 The Presidency (3 credits)—*Prerequisite(s): There are no prerequisites for this course. It would be beneficial if students had some background in American politics but this is not a requirement for enrolling in the class.* This course will examine the evolution, and development of the office of the President. The topics that will be discussed are: (1) The creation of the office, powers, public perceptions, and interaction with the media; (2) Selection of the President; (3) The development of the executive branch; (4) The role of the Presidency in policymaking.

POLI 4350 International Law (3 credits)—This course introduces the student to the basic legal concepts and principles governing state behavior in the international order, the nature and sources of international law, international agreements, sovereignty of states, and recognition of statehood, jurisdiction, immunities, and responsibility. Current events in the international system are also examined with an international law perspective.

POLS 1501 Introduction to Internet Relations (3 credits)—This course is designed to provide you with a broad introduction to International Relations (IR). This course will introduce you to the fundamental approaches to studying IR and will consider how each approach treats selected aspects of current international politics.

POLS 3010 Comparative Politics (3 credits)—This course offers a theoretical and empirical comparison of various political processes, structures, and ideologies among selected countries. Particular attention will be paid to the role of ideologies and to how democracy has been instituted in different countries.

POLS 4508 Theories/Concepts of International Relations (3 credits)—*Prerequisite(s): An introductory course in International Relations theory is preferred but not required.* The purpose of this course is to provide advanced coverage of the field of International Relations Theory. Course readings will focus on original theoretical and empirical works. As such, students will be exposed to classic studies that espouse the central tenets of IR theory. To show how theories have changed over time, attention will also be given to current works and variants of IR theory. Armed with the theoretical foundation, we will then cover some of the major issues of contention within the field of IR including morality, international conflict, and the pursuit of peace.

PS 2020 State and Local Government (3 credits)—*Prerequisite(s): There are no prerequisites for this course except a desire to know how states and local governments work. A basic knowledge of American government is helpful, though not required.* This course covers the basics of how state and local governments operate. It includes topics such as federalism, state constitutions, political parties and elections at the state and local level, legislatures, governors, the judiciary, the structure of local governments, and of course public budgeting and service delivery. The course also deals with several issue areas of concern to states and local governments such as education, criminal justice, economic development, and social welfare and health care policy. There are seven weekly quizzes based on the textbook readings, several essays based on the reading of a different book, a closed book timed midterm and a closed book timed comprehensive final exam.

PS 3510 International Political Economy (3 credits)—*Prerequisite(s): PS 1010 and 3210 or permission of instructor.* The relation between politics and economics in international affairs and its implications for global peace, security, ecology, and social welfare.

PSCI 1010 Survey of Physical Science I (3 credits)—*Prerequisite(s): Two years high school algebra and acceptable placement scores, or DSPM 0850.* PSCI 1010 includes a study of six fundamental components of the physical sciences, **Newtonian mechanics;** linear motion, momentum, energy, gravity, satellite motion, fluid mechanics, **Thermodynamics;** thermal energy, heat transfer, **Electricity, Magnetism, Waves;** sound and light waves, and the properties of light. This course also includes a study of **Chemistry** including the structure of the atom, the atomic nucleus, periodic table, chemical bonding, chemical reactions, acids, bases, molecular mixing, organic chemistry, and nuclear chemistry. This course will establish a base with which the non-science student can view nature more perceptively. This course is designed to correct a missing essential in the sciences: the practice of conceptualizing before calculating. The equivalent of three hours lecture and three hours laboratory per week is required. Four (4) credit hours.

PSCI 1020 Survey of Physical Science II (4 credits)—*Prerequisite(s): DSPR 0800, DSPM Mods. 1-7.* Designed for the non-science major to fulfill general education requirements in the laboratory-based physical sciences. This course includes a study of three fundamental components of the physical sciences: (1) Chemistry: Structure of the atom, the atomic nucleus, periodic table, chemical bonding, chemical reactions, acids, bases, molecular mixing, and organic chemistry. (2) Earth science: Rocks, minerals, earth's internal properties, water surface properties, the atmosphere, oceans, and the weather. (3) Astronomy: Our solar system and the relation to the universe. This course is designed to correct a missing essential in the sciences, the practice of conceptualizing before calculating.

PSY 101 General Psychology I (3 credits)—*Prerequisite(s): Reading and writing proficiency appropriate for college-level coursework.* This is an introduction to psychology course. This course is designed to provide an overview of the field of psychology and human behavior. Topics include: philosophical perspectives, history, biology, learning, personality, behavioral biology, development, motivation, emotion, abnormal behavior, theories, and therapies.

PSYC 2111 Psychology of Human Growth and Development (3 credits)—*Prerequisite(s): Students must possess reading and writing proficiency appropriate for a college-level course. It is preferable that students have had an introductory psychology course prior to taking this course.* This course surveys the biological and environmental factors influencing the physical, intellectual, social, emotional, and language development from birth until death. It explores causes and results of interruption in or interference with the developmental process. This course surveys the changes individuals go through from conception to death—from "womb to tomb". The aspects of development including biological, social, cognitive, emotional, and moral will be covered. The theme of this course is change. We will examine how the abilities, needs, problems, and concerns of humans change throughout life, and how people are shaped by their experiences throughout their development.

PSYC 3210 Abnormal Psychology (3 credits)—*Prerequisite(s): General Psychology.* A descriptive and theoretical survey of the major forms of psychopathology in children, adolescents, and adults. The course will examine current trends and research in the fields of mental health and psychopathology.

PSYC 3305 Learning and Memory (3 credits)—*Prerequisite(s): Satisfactory completion of at least one course in introductory psychology is a prerequisite for enrollment in this course. This prerequisite is necessary to ensure that students have some familiarity with the language, basic concepts and general methodology of psychology.* This course will involve a survey and analysis of basic processes involved in acquisition and retention of new behaviors and alterations of existing behaviors in animals and humans. The course will examine the central theoretical concepts and issues in the fields of learning and memory.

PSYC 3306 Physiological Psychology (3 credits)—This course reviews human brain-behavior relationships. The outline is designed to provide you with a study guide which emphasizes the important aspects of the material pertaining to this topic. Use the outline as a guide to study, the book, and other resources to expand on its contents.

PSYC 3590 Psychology of Personality (3 credits)—*Prerequisite(s): Introductory Psychology is recommended but not required.* This course is designed to provide students with a critical overview of personality theory, research, assessment, disorders, and therapy. The course will take a scientific approach to the study of personality. This means that we will devote a good deal of attention to current theoretical and research approaches. Classic theories of personality will also be covered. This is primarily a course on the varieties of "normal" personality functioning rather than aspects of abnormal psychology. Students will have several opportunities to complete examples of personality measures during the course.

PTMA 3020 Managing Information Technology (3 credits)—*Prerequisite(s): AOM 2110, CSCI 1000, MIS 1100, AOM 2100, OR equivalent computer efficiency.* Managing Information Technology is designed to provide a real-world understanding of information systems technologies. A knowledge of information technology is essential in most aspects of today's professional careers.

PTMA 3500 Methods of Performance and Productivity Assessment (3 credits)—This course is designed to expose students to fundamental theories of organizational performance measures, such as Management by Objectives (MBO) and Total Quality Management (TQM). In addition, the course will train managers in the use of these techniques for the purpose of improving the overall management and operation of the organization.

PUBH 4707 International Health (3 credits)—Designed to provide a fuller understanding of the patterns of medical care delivery and public health practices and the factors that inhibit or enable their applications among community groups and organizations around the world.

PY 151 Psychology of Personal Adjustment (3 credits)—The purpose of this course is to increase self-knowledge, personal freedom, and personal accountability, and the ability to effect a positive personal change. Emphasis is on self-discovery, self-awareness, and personal growth. To succeed active participation is required.

PY 215 Child Growth and Development (3 credits)—*Prerequisite(s):Psychology 101: General Psychology.* Physical, emotional, social and intellectual child development from conception through adolescence; concepts of development and function derived from theoretical approaches, research and clinical observation emphasized; child rearing applications included. Activities will include written assignment, online student presentations, mastery quizzes, mid-term exam and final exam.

SCED 4904 Independent Study in Science (1 credit)—*Prerequisite(s): Acceptance into the Add-On program in chemistry or biology, a program that is part of the Regents Online Degree Program system.* This course will emphasize classroom management strategies, teaching strategies, laboratory techniques and selection of appropriate resources and materials for teaching middle and high school science. Students will be involved in methods/activities designed to portray the teaching of science as a student-centered, hands-on experience. The student will demonstrate knowledge of textbook assignments, submit journal article reviews, and develop lesson plans, a unit plan, and a rationale statement on "why I want to become a science teacher."

SOAA 3350 Social Statistics (3 credits)—This course is an introduction to statistical techniques commonly used in the analysis of data from many sources. Emphasis is placed on the assumptions, restrictions,

and uses of various methods of analyzing data rather than on the mathematical derivation of formulae.

SOAA 3444 Data Analysis (3 credits)—*Prerequisite(s): CSCI 1100, MATH 1080, and SOAA 3210*. Instruction on the use of SPSS for Windows and/or other software packages for analyzing social science via statistics, with an emphasis on interpretation and application.

SOC 1010 General Sociology (3 credits)—*Prerequisite(s)/Corequisite(s): Students must be able to read and write at the college level. Students will be expected to write and express themselves in good grammatical, concise, and Standard English. Poor grammar will affect your participation in group discussion and the written homework assignments. Grades will be based on writing skills, presentation, thoroughness, and timeliness*. The purpose of this course is to introduce you to theoretical approaches of sociology. This course will emphasize the subject areas below: Culture, gender, socialization, race and ethnicity, groups and organizations, economics and politics, social interaction, family and religion, deviance, education and medicine, global and social stratification, population and urbanization, sex, environmental concerns. We will also discuss theories and methods of sociological research.

SOC 1020 Social Problems (3 credits)—*Prerequisite(s): Students must be able to read and write at the college level. Students will be expected to write and express themselves in good grammatical, concise, and Standard English. Poor grammar will affect your participation in group discussion and the written homework assignments. Grades will be based on writing skills, presentation, thoroughness, and timeliness.* The purpose of this course is to introduce you to the increasingly acute and intense problems such as alcoholism, violence, drugs, crime, inequality, lifestyle preferences and environmental abuse within the context of social change. We will utilize various theoretical/sociological paradigms.

SOC 3150 Social Psychology (3 credits)—*Prerequisite(s): Sociology 1010.* Social Psychology is the study of the factors that influence human interaction and the consequences of human interaction. The primary theoretical perspective examined in this course is symbolic interactionism. This theory examines how symbolic communication and interaction shapes our social world, our society, and ourselves. The student will develop an understanding of the basic tenets of this theory and how to apply these to real life situations. The course will more briefly examine social exchange theory and attribution theory in order to broaden the student's understanding of human interaction by including these alternative perspectives. These latter two perspectives will in particular be used to examine justice and fairness in human interaction.

SOC 3200 Sociology of Sex and Gender (3 credits)—*Prerequisite(s): SOC 1010. The students should have a basic understanding of the sociological perspective.* Through a combination of readings, discussions, and written assignments, this course examines the concept of gender and its impact on our society. First, we will critically review various theoretical perspectives that have tried to define sex and gender categories, explain differences between men and women, and sometimes justify gender stratification. We will then look at how men and women are assigned different roles in various institutions, and how they have different levels of social, economic, and political power in society. We will also look at the consequences of gender categorization for our intimate relationships, our health, our attitudes to violence. Finally, we will look at how throughout history, social movements have challenged existing gender categories, and what issues will be prominent in the future. The approach of this course is that the current gender hierarchy tends to exaggerate differences between men and women and force them into rigid molds, while in reality, men and women have much in common, and would benefit from a more flexible approach to gender.

SOC 3650 Juvenile Delinquency (3 credits)—*Prerequisite(s): Sociology 1010.* Thus course explores the nature of delinquency and the extent to which it is a social problem in the USA. The major theories of causation are presented and critically examined. The juvenile justice system is studied historically and in its current form. The present and future of delinquency control and prevention are examined.

SOC 3700 Sociology of Childhood (3 credits)—*Prerequisite(s): Sociology 1010.* This course explores the nature of childhood and the development and socialization of children from infancy through adolescence. Through course readings, assignments, and discussions, the course will cover the agencies and social forces that shape children.

SOC 4010 Organized Crime (3 credits)—*Prerequisite(s): Sociology 1010.* Organized crime refers to criminal activity involving multiple offenders who operate in a structured manner for purposes of sustaining profits from an illegal activity. There are different forms of organized crime with the more conventional image being that of illegal activities committed by basically criminal organizations such as the Mafia, Triads, the Vory, etc. However, another form of highly organized crime is that which is committed by otherwise legitimate organizations such as corporations. Since this course is entitled **organized crime**, not "crime organizations," we will explore both forms of the problem looking for common threads of causation and control.

SOC 4330 Population and Soc. Process (3 credits)—*Prerequisite(s): SOC 1010 or consent of the instructor.* This course narrates and explains how and why should we study a human population. The course emphasizes sociological analysis of the interrelationship between particular population characteristics and patterns of social organization.

SOC 4510 Social Deviance (3 credits)—*Prerequisite(s): Course prerequisites include Introduction to Anthropology, Psychology, Political Science, Sociology, or other social science. While not a prerequisite, some background in social statistics is suggested.* Social research is the foundation for the scientific understanding of social phenomena. This course introduces students to the theory and methods of social research. Although the course content focuses on sociology, the research methodology covered in this course is applicable to other social science disciplines (and science in general). Students can expect to learn the entire process for conducting scientific research and evaluating research conducted by other researchers. Course activities involve library research (this can be accomplished online), practical assignments that lead to the development of research skills and a research proposal, and participation in discussion groups to practice research communication skills.

SOC 4720 Sociological Theory (3 credits)—*Prerequisite(s): Students must be able to read and write at the college level.* This class is designed for students to examine the contributions of classical and contemporary sociological theory. A goal of the class is for students to gain an understanding of theory as an organized system of accepted knowledge that applies in a variety of circumstances to explain a specific set of phenomena. Another goal of this class is for students to have an introduction to some of the main structural, philosophical, and thematic issues important to the field of Sociology.

SOCI 1120 Introduction to Cultural Anthropology (3 credits)—*Prerequisite(s): All developmental courses in reading and writing/composition must be completed.* This course introduces the study of human culture. It focuses on human adaptation and diversity; the development and variety of economic, political, religious, family and expressive institutions.

SOCI 2000 Marriage and Family (3 credits)—*Prerequisite(s): DSPS 0800, DSPW 0800, DSPR 0800, or appropriate entrance scores.* An overview of the effects of societal change on marital and non-marital relationships. Topics include premarital dynamics, singles, dual career families, family violence, and divorce.

SOCI 4510 Introduction to Social Research (3 credits)—*Prerequisite(s): Include Introduction to Anthropology, Psychology, Political Science, Sociology, or other social science. While not a prerequisite, some background in social statistics is suggested.* An introductory social science course (preferably Sociology) is an important prerequisite because it introduces students to

social research subject matter, and the theoretical perspectives and research techniques used in social research. An understanding of social statistics will help students better understand and critique existing social science research. Social research is the foundation for the scientific understanding of social phenomena. This course introduces students to the theory and methods of social research. Although the course content focuses on sociology, the research methodology covered in this course is applicable to other social science disciplines (and science in general). Students can expect to learn the entire process for conducting scientific research and evaluating research conducted by other researchers. Course activities involve library research (this can be accomplished online), practical assignments that lead to the development of research skills and a research proposal, and participation in discussion groups to practice research communication skills.

SP 110 Fundamentals of Public Speaking (3 credits)—*Prerequisite(s): ENGL 1010.* An introductory public speaking course stressing the organization and presentation of the extemporaneous speech in a variety of settings. The goal of this course is to incorporate the typical speaking assignment into situations students might face in their personal and professional lives.

SPAN 1010 Beginning Spanish I (3 credits)—*Prerequisite(s)/Corequisite(s): None, but the student should be able to use a computer and browse the Internet. Spanish 1010 is a beginning-level course covering elementary grammar, pronunciation, and conversation.* Material is presented through the use of videotape, online presentations, online exercises, online practice quizzes, and online exams. Students demonstrate pronunciation and conversational skills by preparing an audiotape documenting their progress through the course. The course includes audio and video components that allow the student to hear vocabulary and pronunciation and exams include both written questions as well as listening/audio questions requiring the student to translate spoken statements.

SPAN 1020 Beginning Spanish II (3 credits)—*Prerequisite(s)/Corequisite(s): Complete SPAN 1010.* The student should be able to use a computer and browse the Internet. Spanish II will cover from Chapter 6 to Chapter 10 located in Spanish 102, *Puntos de partida*. Dr. Barriga will help you with the pronunciation, and you will be responsible for understanding, remembering, and using the grammar, vocabulary, and cultural readings taught in all chapters.

SPAN 2010 Second Year Spanish I (3 credits)—*Prerequisite(s): Beginning Spanish I and II. Student should be able to use a computer and be familiar with the Internet.* This course will cover vocabulary and structures that will allow you to talk about the pressures of modern life, modern technology, different forms of artistic expression, the environment, your relationships with others , and careers. Your instructor will help you with pronunciation if needed. You will be responsible for learning and using the grammar and vocabulary presented in each chapter, and for understanding the readings.

SPAN 2020 Second Year Spanish II (3 credits)—*Prerequisite(s): Intermediate Spanish I. Students should be able to use a computer and be familiar with the Internet. They will also need to be familiar with the Wimba Voice Board and be able to send Audio Files.* Spanish 2020 is the second course of the intermediate level of Spanish, which is designed to provide college students with a more advanced foundation in the following basic skills: speaking, listening, reading, writing and culture.

SPAN 3550 Latin America: The Countries and the Peoples (3 credits)—*Prerequisite(s)/Corequisite(s): There are no prerequisites for this course. No knowledge of Spanish is required.* This course is an introduction to Spanish-speaking Latin America. It will examine the commonalities as well as the unique national experiences of the Spanish-speaking countries of Latin America. The course will address the social, political, and economic factors that have shaped modern Latin America. Initial units will provide general information on the region and its history. Subsequent units will examine individual countries with a focus on Mexico, Cuba, Central America, Peru, Argentina, and Chile. No knowledge of Spanish is required. The course is taught entirely in English.

SW 3170 Family Caregiving (3 credits)—*Prerequisite(s): SOC 101 or PSY 141.* Issues to be examined will include: who are caregivers,—gender roles, managing family stress, respite care, establishing support groups, cost of caregiving, finding local resources, legal challenges, differential caregiving tips for various illnesses, disabilities from infancy to old age, emerging trends and long-distance caregiving.

SW 3200 Cultural Diversity (3 credits)—This course is designed to expand the students' awareness of both the cognitive knowledge and skill necessary to effectively interact with and/or serve culturally diverse populations. This course will particularly emphasize attitudes and competencies that are important in effective professional relationships. The course will not be exhaustive in its discussion of diverse populations, but will focus on those whose diversity is cultural and who are more likely to be encountered by the students taking the course. Students will be asked to select one of the listed cultures for an in depth study. Student will be expected to be consistently involved in discussions, learning projects, writings and videos related to that culture.

TEAE 4020 Read Write Learn Methods ESL (3 credits)—TEAE 4020/5020/6020 is designed to build background knowledge regarding oral, reading, and writing development in English for K-12 English language learners. The course covers language acquisition theories, literacy development in the first and second language, classroom organization, teaching strategies, and instructional methods in reading and all content areas as well as assessment procedures for effective English language instruction in the PreK-12 classroom environment. The course is specifically designed to assist practicing classroom teachers in meeting the needs of English language learners and newly arriving immigrant students with varying levels of English language proficiency and varying levels of educational experiences. The course is not recommended for teachers of EFL (English as a Foreign Language) or Foreign Language teachers.

TEAE 4260 Teaching ESL Internet and Tech. (3 credits)

TEAE 4300 Multicultural Education (3 credits)—*Prerequisite(s):*The purpose of this course is to aid students in becoming aware of, understanding, and being sensitive to the needs and interests of ethnic and cultural groups, with the underlying philosophy being that the differences and similarities that characterize individuals and groups should be cherished for their worth and cultivated for the benefit they bring to all people.

TEAE 4437 Assessment for ESL (3 credits)—The course, through readings in the text and on web sites, examines in depth the major categories of language assessment.

TEAE 4500 Linguistics (3 credits)—*Prerequisite(s):* This course is designed: 1. to introduce future or in-service language teachers and professionals to a basic understanding of the structure and function of the interrelated systems of syntax, pragmatics, phonetics, phonology, and semantics, both for languages in general and English specifically; 2. to learn to apply that knowledge to work more effectively with language students; 3. to acquire the basic analytical skills applied linguists use to investigate new linguistic situations and data as they are encountered in real-world teaching; and 4. most importantly, to make the participants aware of the vast unconscious linguistic insights they already possess and to help them learn to tap those resources to use in teaching.

TEAE 4501 Modern English Grammar (3 credits)

TEAS 4001 Collaborative Practices, Trends and Issues, and Characteristics of the Exceptional Learner in Special Education (4 credits)—*Prerequisite(s): Participant must have a teaching certificate in any area. TEAS 4001 can be taken in conjunction with 4002.* Includes special education mandates, LRE; ADA; general education; parents; communities; support services; and characteristics of special learners.

TEAS 4003 Assessment Procedures in Special Education (4 credits)—This course is an in depth study of the diagnostic techniques and instruments used by educators, psychologists and other school professionals. Students will participate by completing assigned readings, quizzes, and by communicating with the instructor and other students through email, being involved in discussion groups, and by completing an assessment battery using appropriate instruments discussed in class and preparing an assessment report. Graduate students will also review and write a diagnostic summary on the child in a case study presented by the instructor.

TEAS 4004 Applied Behavioral Intervention and Supp. (4 credits)—This course involves the study of modifying student behavior using techniques of applied behavior analysis in a variety of educational settings. Through individual readings, interaction with classmates, and group and individual projects, students will increase awareness for options for modifying behavior with a focus on behavioristic interventions.

TEAS 4005 Reading Methods Across the Curriculum (4 credits)—*Prerequisite(s): TEAS 4005 is part of the program of study leading to the add-on endorsement in Special Education in the Regents Online Degree Program (RODP). Before enrolling in TEAS 4005, students must meet the following criteria: Admission to the RODP add-on endorsement in Special Education; prior to enrolling in this course, students must have completed TEAS 4001 and 4003; TEAS 4004 and 4007 may be taken with this course.* This course is designed to inform teachers about reading disorders, reading remediation and reading in the Least Restrictive Environment. Students will learn strategies designed to detect and correct these special needs. Alternative modes of instructions are a focus.

TEAS 4007 Math Methods Across the Curriculum (3 credits)—*Prerequisite(s): TEAS 4007, TEAS 5007, TEAS 6007 is part of the program of study leading to an Add-On Special Education Endorsement of the Regents Online Degree Program (RODP). Before enrolling in TEAS 4007, TEAS 5007, TEAS 6007* ***a student must have a teaching license*** *and* ***must have completed TEAS 4001*** *(Collaborative Practices, Trends and Issues, and Characteristics of the Exceptional Learner in Special Education)* ***and TEAS 4003*** *(Assessment Procedures in Special Education).* TEAS 4007, TEAS 5007, TEAS 6007 (Math Methods Across the Curriculum) will engage participants in mathematics thinking, discussions, and instructional projects to explore theory, understand best practices, and design and implement these strategies in mathematics instruction in grades K-8. It will begin with an exploration of learning theory and best practices advocated by the National Council of Teachers of Mathematics, followed by explorations and the designing of hands-on activities for teaching mathematics to all children including diverse populations and exceptional needs individuals. Participants will be expected to work achieving **10 hours of clinical experience** with primary grade, exceptional needs children as they begin to understand and implement best practices in mathematics teaching.

TEAS 4010 Special Methods Instl and Teaching Composition (4 credits)—*Prerequisite(s):* TEAS 4001/5001; *TEAS 4003/5003; TEAS 4004/5004; TEAS 4005/5005; TEAS 4006/5006; TEAS 4007/5007; TEAS 4008/5008.* This course is designed to give students the skills necessary to teach students with physical, health, and multiple disabilities as well as those with emotional and behavioral disorders. The focus will be on the systematic instruction for these students, life skills, transitioning these students, managing behaviors, and medical issues. Students are to complete a 1-hour practicum, spending 30 hours in a Life Skills or Behavioral classroom for those students who are not teaching or a special classroom project for those currently teaching in a special education setting. Course material will be presented via Modules which must be completed in numerical order. Discussion boards will be utilized as part of the Modules.

TEAS 4012 Special Methods Inst.: Early Childhood Special Education (4 credits)—*Prerequisite(s): TEAS 4001, TEAS 4003, TEAS 4004, TEAS 4005, TEAS 4006, TEAS 4007, TEAS 4010.* This course will examine intervention strategies to promote optimal development for developmentally delayed and at risk children birth to age 3. Public law 105-17, various service delivery models, intervention techniques and procedures, curriculum and individualized family service programs will be explored. Particular emphasis will be placed on the role of the primary caretaker as major change agent for the child. Fifteen hours of field experience or a service learning project in infant/toddler programs will be required. This course will involve online collaboration, interactive case studies and assignments directly related to service delivery for young children and their family.

TELC 2007 Adolescent and Adult Learners (3 credits)—This course focuses on psychological theories related to adolescent cognitive, social and physical development. Adolescents are experiencing a myriad of changes. A better understanding of these changes will help educators plan and implement appropriate lessons, activities, lectures, assignments, and teaching strategies. Issues relevant to intellectual development, socialization, and educational evaluation are examined. Additionally, teacher variables and student variables in the instructional process are explored. Students should be able to apply their knowledge in a variety of settings with a multicultural perspective.

TELC 2008 Learning through Assessment/Evaluation (3 credits)—The online course will contain twelve modules of instruction that will involve the student in electronic research, dialogue with teaching colleagues and administrators, and generation of products resulting from assigned activity. The twelve modules focus on eleven areas of teaching effectiveness stated as standards.

TELC 2010 Survey of Exceptionalities and Diversity (3 credits)—This course will enable instructors to identify psychological, physical, educational, medical, behavioral and learning characteristics and needs of individuals with various disabilities, as well as working with students from diverse cultural, social, ethnic and racial backgrounds. It will also include information regarding the modification and adaptation of instruction as it relates to ADA in order to fit individual needs and learning styles. This course will also enable the instructor to develop individualized educational programs with the principles of normalization and the least restrictive environment.

TELC 2011 Teaching and Technology (3 credits)—*Prerequisite(s):* This course will address the "Tennessee Statement of Education Teacher Licensure Standards for Professional Education."

TELC 2012 Teachers/Agent of Change (3 credits)—Teachers as Agents of Change is designed for those students working in a public school environment on the Professional Occupational or Alternative C License. The course is designed to provide an overview of current issues, trends, and problems that are commonplace to teaching in public school settings. Students will engage in analytic learning experiences which focus on: a) teaching in urban, suburban, and rural settings, b) meeting the needs of diverse student populations, c) historical, sociological, and philosophical aspects of education in a diverse society, d) legal, financial, equality/inequality of access and resources, e) governance issues related to public schooling in the U.S., f) developing knowledge and skills regarding professionalism, national and state initiatives, effective teaching, and licensure, and g) action research to improve current practice.

TELC 2015 Survey Exc. and Div Post-Secondary Schools (3 credits)

TELC 4001 Adolescent Development (3 credits)

TELC 4002 Assessment and Evaluation (3 credits)—*Prerequisite(s): This is an upper division course in the Department of Education. Students should file a plan of study with the Director of Graduate Studies if pursuing an advanced degree.* The online portion of this web-based version of TELC 4002 will contain fifteen modules of instruction that will involve the graduate student in electronic research, dialogue with teaching colleagues and administrators, and generation of products resulting from assigned activity.

TELC 4003 Management of the Learning Environment (3 credits)—Use of appropriate knowledge and skills for managing the total learning environment in the early, middle, and secondary school settings; emphasis on development of skills that facilitate effective teaching through appropriate management techniques and the involvement of parents and community members. A major paper focusing on an appropriate topic of the students choice, content modules, and highly interactive discussion boards will provide learning opportunities in an online setting.

TELC 4004 Survey Exceptional Child (3 credits)—This course provides a critical study of the history, issues, trends, and supporting research in special education. This course will enable the student to identify psychological, physical, educational, medical, behavioral and learning characteristics and needs of individuals with various disabilities, as well as students from diverse cultural, social, ethnic and racial backgrounds. Inclusion of students with disabilities and techniques to adopt instruction to fit individual needs will be emphasized. An understanding of legislation, regulations, and litigation related to serving individuals with disabilities will enable the student to correlate individualized educational programs with the principles of normalization and least restrictive environment.

TELC 4005 Teaching and Learning with Technology (3 credits)—*Prerequisite(s): This is a graduate-level course. Thus, students must meet the requirements of graduate status noted at their home school.* Internet technologies connect students and teachers to innovative learning projects, multimedia-interactive information and activities, virtual classrooms and information from around the world. Students and teachers must acquire both the knowledge and technical aspects of how to integrate the Internet into their learning environments.

TELC 4006 Teachers-Agents of Change (3 credits)—Teachers as Agents of Change is designed for those students working in a public school environment on the Alternative C License. The course is designed to provide an overview of current issues, trends, and problems that are commonplace to teaching in public school settings. Students will engage in analytic learning experiences which focus on: a) teaching in urban, suburban, and rural settings, b) meeting the needs of diverse student populations, c) historical, sociological, and philosophical aspects of education in a diverse society, d) legal, financial, equality/unequality of access and resources, e) governance issues related to public schooling in the U.S., e) developing knowledge and skills regarding professionalism, national and state initiatives, effective teaching, and licensure, and f) action research to improve current practice.

THEA 1030 Introduction to Theatre (3 credits)—*Prerequisite(s): DSPW 0800 and DSPR 0800 or acceptable placement scores.* This course is an introduction and overview of theatre as an art form; emphasis on understanding the nature of drama and its place in culture, the history and theory of theatre and the production process.

UNIV 3580 Hebrew and Greek Legacy (3 credits)—Hebrew and Greek Legacy is an interdisciplinary Humanities course. It will employ a variety of Humanities disciplines, most notably history, literature, philosophy, and religion, to examine the themes of Hebrew and Greek thought. These two cultures have had a profound influence on nearly all aspects of Western thought, so we will be examining the ancient roots of our own culture.

UNIV 3581 Faith, Reason, Imagination (3 credits)—Faith, Reason, and Imagination is an interdisciplinary Humanities course. It will employ a variety of Humanities disciplines, most notably history, literature, philosophy, and religion, to examine the themes of faith, reason, and imagination, the three distinct ways by which people have claimed to know—to obtain knowledge, meaning, or truth. Our proposed subject of study can be helpful in clarifying how each one of us comes to answer questions, solve problems, and make decisions that are very personal to us. We shall be dealing directly with such personal topics as the existence and nature of God, right and wrong, and love.

UNIV 4110 Internship (6 credits)—What is an internship? An internship is an educational activity within an organization dealing with the type of work you hope to do upon graduation. It is a learning environment where you are treated as one of the employees, but often don't have all the pressures of full-time employees. You'll also earn college credit.

UNIV 4706 Managing Software Development (3 credits)—The purpose in this course is to develop skills necessary to be an effective manager of an application software development team.

UNIV 4995 Special Project (3 credits)—Academic research or other creative activity resulting in a tangible product to demonstrate synthesis of a student's coursework.

WEB 2120 Audio/Video for Web (3 credits)—*Prerequisite(s): A practical knowledge of how the Internet operates and working knowledge of HTML code, graphic formats, web site building, web page design, and an introductory knowledge of a computer graphics program is required. These pre- and co-requisites may be obtained through COMN 1000—Beginning HTML (NSTCC).* This course is designed to familiarize students with the technologies associated with bringing photographic (film, video and still) images and audio to the Internet environment and enable them to identify and use the tools which facilitate these media in Web sites. Appropriate media selection, software tools for encoding various media, delivery system attributes and limitations, associated file types, audio and video codecs and software players will be discussed. Students will learn to prepare aural and visual media for the Web by creating and encoding assigned projects. Students will learn to design for and solve problems with the integration of audio and video media into pre-existing Web sites.

WEB 2200 Internet Technologies (3 credits)—*Prerequisite(s): Students taking this course should be proficient in Windows 98, 2000, or XP and have completed BIT 1150 Computer Concepts and Applications (RODP).* CIW Foundations teaches basic hands-on skills and knowledge which Internet professionals are expected to understand. The course is divided into three parts: Internet Business Foundations, Site Development Foundations, and Network Technology Foundations. After completing this course, students will be prepared to take the CIW Foundations Certification Exam. The certification exam is not a part of this course; you should schedule it at a Prometric or Vue Testing Center

WEB 2210 CIW Design Methods and Teaching (3 credits)—*Prerequisite(s): WEB 2200—CIW Foundations.* CIW Site Design Methodology and Technology teaches you how to design and publish Web sites. General topics include Web Site Development Essentials (such as the site development process, customer expectations, and ethical and legal issues in Web development), Web Design Elements (such as aesthetics, the site user's experience, navigation, usability and accessibility), Basic Web Technologies (such as basic Hypertext Markup Language [HTML], Extensible HTML [XHTML] and extended technologies, image files, GUI site development applications, site publishing and maintenance) and Advanced Web Technologies (such as multimedia and plug-in technologies, client-side and server-side technologies, and Web databases).

WEB 2811. Advanced Computer Graphics (3 credits)—*Prerequisite(s)/Corequisite(s):A practical knowledge of how the Internet operates, HTML code, graphic formats, web site building, web page design, and an introductory knowledge of a computer graphics program is required. These pre- and co-requisites may be obtained through these courses: INTC 1050 - Computer Graphics (RODP); or OST 2801 - HTML Coding, 2802 - Web Graphics, 2803 - Web Site Design (PSTCC); or CSIT 2470 - Internet and New Hardware/Software Products; or COMN 1000 - Beginning HTML (NSTI), COMN 1010 - Basic Web Design (NSTI), and COMN 1020 - Basic Web Graphics (NSTI) or equivalent knowledge and training.* This course is designed to enhance the computer skills of those using graphics programs to prepare images for web or print delivery. Students will use Photoshop for graphics manipulation and ImageReady for animation.

WEB 2812 Advanced Web Page and Site Design (3 credits)—*Prerequisite(s): A practical knowledge of how the Internet operates, HTML code, graphic formats, web site building, web page design, and an introductory knowledge of a computer graphics program is required. These pre- and co-requisites may be obtained through these courses: COMN 1000—Beginning HTML (NTSCC).* This problems-oriented course will teach the use of dynamic graphics elements to enhance web pages and sites. Advanced concepts in page layout and site optimization will be studied with emphasis on principles used to craft dynamic web pages that get noticed. Exercises and projects will allow students to apply the principles of web design to their own sites that will be created in the course.

WMST 2010 Introduction to Women's Studies (3 credits)—*Prerequisite(s): ENGL 1010 Composition I is required for the course so students will have the competency to write the required formal research paper.* The course is an interdisciplinary approach to the study of women's social identity and placement throughout history and the world. Theoretical perspectives and research from sociology, psychology, biology, and anthropology are used to understand how gender shapes our lives on individual, cultural, and societal levels. Areas of study emphasize the role of gender in social institutions including family, workplace, education, religion, media, and politics.