Description of Courses
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Course descriptions are listed alphabetically by discipline name. The discipline abbreviation appears in parentheses immediately after the discipline name. The Schedule of Courses issued each semester by the Office of Academic Records lists courses alphabetically by discipline abbreviation, not discipline name. See the following table for a list of all disciplines listed alphabetically by discipline abbreviation.

Courses are offered in rotation. The frequency of course offerings is designated by (F) for fall semester, (Sp) for spring semester, (Su) for summer semester, or (as needed). If a course is offered only in odd or even numbered years, the designation will include -odd or -even. Frequency designations are located in Courses Offered by the Department at the end of each departmental section.

Courses taken for Graduate Credit (numbered 500, or above) have additional requirements for completion with graduate credit. Graduate students will be expected to perform at a more rigorous level. Additional content will be required. Graduate students will be expected to complete additional projects.

Modern Foreign Language courses designated as Elementary or Intermediate must be taken and passed in sequence. Placement tests are given in the Department Office, upon request, to students with prior experience with French, German, or Spanish in order to place them at an appropriate level.

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HPER  Human Performance  PLSC  Plant Science
HSEM  Honors Seminar  PORT  Portuguese
IDST  Interdisciplinary Studies  POSC  Political Science
INEG  Industrial Engineering  PRAD  Park and Recreation Administration
INFS  Information Systems  PSYC  Psychology
INTD  Interior Design  READ  Reading
JAPN  Japanese  RLST  Religious Studies
LDSP  Leadership  SEDU  Secondary Education
LIBS  Library Service  SOC  Sociology
MATH  Mathematics  SOIL  Soil Science
MBIO  Microbiology  SPAN  Spanish
MGT  Management  SPED  Special Education
MKTG  Marketing  SPMG  Sport Management
MSL  Military Science and Leadership  STAT  Statistics
MUAP  Applied Music  SWRK  Social Work
MUED  Music Education  TCED  Teacher Education
MUEN  Music Ensembles  TCFM  Textiles, Clothing and Fashion
MUS  Music  Merchandising
NRM  Natural Resources Management  THEA  Theatre
NURS  Nursing  UNSC  University Scholars
NUTR  Nutrition  WBIO  Wildlife Biology
PACT  Physical Activity  WMST  Women’s Studies
PHIL  Philosophy  ZOOL  Zoology
PHYS  Physics

**TBR Equivalents**

Undergraduate UT Martin courses which have TBR system-wide common equivalents will be noted as follows:

**ART 110 (3) (TBR: ART 1030)**
Accounting (ACCT)

201 Financial Accounting for Decision Making (3) This course is designed to help students appreciate the role of accountants in providing information helpful to decisions of investors, creditors, government regulators, management and others and understand how that information can be used. Emphasis is on comprehending the meaning and value of the balance sheet, income statement and statement of cash flows. Prereq: Sophomore standing and MATH 140 or 160 or 185 or 210 or 251.

202 Managerial Accounting Information for Decision Making (3) Uses of accounting information for managerial decision making to aid planning and control activities of managers in business enterprises. Topics include methods for determining the costs of products and services, for assessing product and project profitability and for budgeting and monitoring of costs and profits. Prereq: A grade of C or better in ACCT 201.

300 Accounting for Non-Business Students (3) Survey course in financial and managerial accounting with heavy emphasis on managerial use of accounting information. May not be taken for credit by business students. Credit may not be counted both for ACCT 201-202 and ACCT 300. Prereq: Junior standing.

301 Intermediate Accounting I (3) A professional level study of financial accounting theory and practice, designed to prepare students for careers in all areas of accounting. Beginning with a review of the conceptual framework and the accounting cycle, the course provides a detailed examination of the recording and reporting issues encountered by financial accounting professionals. Prereq: Grade of C or better in ACCT 202 and CSCI 201.

302 Intermediate Accounting II (3) Continuation of ACCT 301. Prereq: Grade of C or better in ACCT 301.

321 Cost/Management Accounting (3) Cost management emphasizing contemporary topics through an understanding of the underlying concepts and fundamental techniques involved in cost accounting for manufacturing and service enterprises. Job-order, process cost volume profit analysis, product pricing, budgeting, activity based costing and standard costing are examined. Prereq: Grade of C or better in ACCT 202.

401 Auditing and Assurance Services (3) Introduction to auditing and assurance services. Course covers the auditing environment, the auditing process and the application of auditing concepts to various types of audits, including financial, operational and compliance. Prereq: MATH 210 and grade of C or better in ACCT 301.

402 Financial Statement Auditing (3) Application of the auditing process to the auditing of financial statements. Prereq: Grade of C or better in ACCT 401.

421 Advanced Cost/Management Accounting (3) A continuation of ACCT 321 with an emphasis on inventory management, just in time costing, support-service costs, long-term capital investment decisions, performance analysis, pricing and incentive systems and performance measurement. Prereq: Grade of C or better in ACCT 321.

431 Individual Taxation (3) Introductory course in taxation with emphasis on individuals, including the study of gross income, exclusions, business and non-business deductions, credits, property transactions, accounting periods and methods and deferred compensation. Prereq: Grade of C or better in ACCT 202.

432 Advanced Topics and Research in Tax (3) Advanced course in taxation with coverage of corporations, partnerships, estates, trusts, gifts and developing research skills. Prereq: Grade of C or better in ACCT 431.

441 Advanced Financial Accounting (3) Accounting practices and theories for business combinations and partnerships. Prereq: Grade of C or better in ACCT 302.

451 Governmental and Nonprofit Accounting (3) An introduction to accounting and financial reporting of state and local governments and nongovernmental nonprofit organizations. Account structure and accounting for various fund types in governmental entities and restricted and unrestricted funds in nongovernmental nonprofit entities are emphasized in the course. Prereq: Grade of C or better in ACCT 301.
461 Accounting Information Systems (3) An introduction to information systems with emphasis on concepts of analysis, design and implementation of accounting systems with attention to internal control and the audit trail. Students will be working with a computerized accounting software package. Prereq: At least a grade of C in ACCT 301 and ACCT 321.

480 Internship in Accounting (1-9) Supervised accounting work experience in business establishments, institutions, or other organizations matched to the student's curriculum. (May not be used to meet upper-division accounting elective requirements.) May be repeated for up to a total of 9 hours internship credit. A maximum of 6 hours may be used to fulfill degree requirements. Pass/Fail. Prereq: Departmental approval required; at least junior standing.

490 Independent Study in Accounting (3) Special research projects undertaken individually under the supervision of the accounting faculty. Students are required to write research reports and give oral presentations. Prereq: Senior standing and approval of department chairperson and accounting faculty.

491 Research in Accounting Theory (3) An examination of accounting concepts, standards, conventions, principles and practices with primary emphasis on the study of authoritative pronouncements comprising generally accepted accounting principles. Prereq: At least a grade of C in ACCT 301.

701 Advanced Topics in Auditing (3) In-depth study of auditing as it relates to financial statements of public companies and governmental agencies. Prereq: One course in auditing.

711 Accounting for Managerial Decisions (3-4) Study of accounting as it applies to the managerial function. Includes both managerial input into the accounting system and managerial use of accounting information. This course may not be used to meet MAC degree requirements. Prereq: ACCT 201 or 300.

721 Advanced Topics in Cost Accounting (3) Study of advanced topics in cost accounting with emphasis on recent developments in cost accounting and in application of quantitative methods in the cost area. Prereq: One course in cost accounting.

731 Advanced Topics in Tax (3) Intensified study of the tax laws with emphasis on the federal income tax. Heavy emphasis on research methodology. Prereq: One course in federal income tax.

741 Advanced Problems in Accounting (3) Study of advanced accounting problems, including standard setting, income determination and disclosure issues. Prereq: ACCT 301 or permission of instructor.

751 Accounting for Nonprofit Entities (3) Study of nonprofit accounting with emphasis on governmental entities, schools, hospitals and voluntary health and welfare organizations. Prereq: ACCT 201 or ACCT 300 or ACCT 711.

790 Accounting Strategic Management and Business Policy (3) An advanced case study, integrating accounting, economics, finance, management and marketing of selected problems encountered in the management of typical organizations engaged in the production of goods and services. Problem analysis and decision-making skills are emphasized in the context of the existing international environment. MAC students must take this course during their last semester. Approval from the Graduate Coordinator is required before registering for this course. MBA students are not allowed to take this course for credit. Prereq: Students must have a 3.00 graduate cumulative GPA with no I grades while enrolled in ACCT 790.

791 Accounting Theory (3) Study of effective or proposed promulgations of accounting standards setting bodies. Prereq: ACCT 301.
799 Individual Readings and Research in Accounting (3) Special advanced research projects undertaken individually under the supervision of the faculty. Prereq: Approval of faculty member and Coordinator of Graduate Studies in Business.

Agricultural Economics (AGEC)

110 Introduction to Agricultural Business (3) An introduction to the field of agricultural business and some of the basic tools and concepts of decision-making. Concepts are illustrated in terms of selected current social and economic issues in the industry of production agriculture, agricultural business and the computer application of those concepts.

271 Farm Management (3) Principles and procedures of farm management. Farm records, accounts, budgets and their uses. Farm tax law. Financing farm acquisition and expansion.

301-302 Special Problems (1, 1) Independent study projects for students exhibiting special interest in applied areas of agricultural economics. Topics may be chosen from, but are not restricted to, production, marketing, management, policy, finance and resource economics. Taught only by arrangement prior to registration.

325 Agriculture and Natural Resource Policy (3) Participants, issues and the policy process. Historical development and current characteristics of commodity, credit, food, trade, environmental and natural resource policy. Relationship between domestic and international agricultural and environmental policy.

335 International Agricultural Trade (3) Theory and practice in international trade in agricultural and food products. Trade policy, trade agreements, trade law, tariffs, customs practices, exchange rates and their impact on trade in U.S. and world agriculture. Prereq: AGEC 110.

345 Agribusiness and Scientific Sales (3) Principles of selling products requiring scientific, agricultural and engineering knowledge. Topics include feature/benefit table design, technical product distribution, wholesale and retail financing, cooperative advertising, group selling, specification selling, personal selling and technical business plans. How to apply technical and scientific skills toward agricultural and engineered product selling.


375 Environmental and Agricultural Law (3) Survey of law and its application to agricultural and natural resource management. Property, contracts, torts, drainage and water rights. Environmental law, land tenure, employment, forms of business organization, estate planning, regulatory law and other selected topics. (Same as NRM 375)

385 Agribusiness Market Planning (3) Preparation of an executive summary and presentation of an agribusiness marketing plan. The product can be used for competition at the local and national levels of the National Agri-Marketing Association. The agribusiness marketing plan involves a rigorous examination of a product, its market, the competition, the plan for market development and a financial analysis of the plan’s profitability. May be repeated for up to six hours of credit.

386 Advanced Agribusiness Market Planning (3) Preparation of an agribusiness marketing plan and actual presentation in competition at the local and national levels of the National Agri-Marketing Association. Includes trips to Memphis and the National Convention. The presentation includes many hours of rehearsal and refinement and preparation for answering questions of Judges. May be repeated for up to six hours of credit.

395 Farm Real Estate Appraisal (3) Methods of valuing and appraising farm real estate, farm real property law and gathering appraisal data. Income capitalization, sales comparison or market value, inventory or cost approaches to farm valuation. Valuation of buildings, insurance, tax, farm loan and condemnation appraisals and estate planning.
401-402 (601-602) Research Participation
(3; 3) Application of the scientific method and techniques of research to investigation of problems in major subject areas of agricultural economics. Restricted to students with demonstrated ability to conduct a supervised research problem. Taught only by arrangement prior to registration.

445 (645) Natural Resources Economics (3)
Economic, social and political factors involved in conservation and utilization of natural resources. Discussion of investment criteria including benefit-cost analysis, multi-objective planning externalities and welfare economics. Impact of outdoor recreation, aesthetics and other non-market considerations associated with resource development. Students are required to write reports and give oral presentations. Prereq: ECON 202.

465 (665) Agricultural Finance (3)
Analysis of capital requirements and investments of farm and agribusiness firms. Evaluation of credit needs and repayment capacity. Leverage, liquidity and risk management. Sources and uses of credit. Agribusiness financial record keeping and interpretation of financial statements. Prereq: AGEC 110 or ECON 202.

471 (671) Agricultural Management (3)

485 (685) Mathematical Economics for Agriculture (3)
Optimization, including mathematical programming. Lagrangean functions and existence of optimal solutions. Static economic models, including input-output analysis, constrained production sets, nonlinear models and general equilibrium models. Dynamic economic models, including balanced growth models, optimal growth models and stability analysis. Course may include some instruction in underlying mathematics for models. Emphasis will be applications in agriculture. Prereq: MATH 160, ECON 201 and 202.

715 Advanced Farm Real Estate Appraisal (3)
Problems and advanced topics in valuing farm real estate, including theory of value, present market value, legal description, property and real estate law, rights and limitations in the use of property, methodology and techniques of appraisal, including the impact of GPS on gathering appraisal data. Analysis of income capitalization, sales comparison and inventory cost approaches to appraisal and how differences in such appraisals can be reconciled. Dealing with complications from valuing buildings and improvements. Ethical considerations in performing appraisals for a specific purpose.

735 Seminar in International Agricultural Trade (3)
Theory and practice in international trade in agricultural and food products with emphasis on real-world problems. Trade policy, trade law, customs practices, exchange rates and their impact on trade in the U.S. and world agriculture. Developing real-world export marketing plans including research, pricing, distribution systems, financing and pro forma invoicing. Discussions of major global trade issues.

745 Agricultural Production Economics (3)
Resource allocation, production selection, and scale of operation of agricultural firms, including risk and uncertainty associated with agricultural production. Prereq: MATH 160 and ECON 202 or instructor's approval.

750 Agricultural Risk Analysis and Decision Making (3)
Application of current risk management techniques to issues specific to the U.S. agribusiness system. Elements include: production risk; crop insurance; diversification; contract production; integration of systems; market risk; futures and options; minimum price contracts; personal risk; estate planning; organizational concerns; interest rate risk; policy risk.
751 Strategic Management Issues in Agriculture (3) Application of current strategic management techniques to agribusiness problems. Emphasis on viewing management from a broad organizational perspective through an integrated approach. The ability to assimilate and analyze information from all aspects of the organization (i.e. management, marketing, information systems, production, finance, accounting, etc.) to analyze complex problems, develop plans and propose recommendations on a top-management perspective.

Agricultural Education (AGED)

310 Integrated Agricultural and Agriscience Education Studies (3) Planning and supervision of agricultural experience programs, agricultural mechanics methods, agriscience methods and the FFA organization. Prereq: Admission to Teacher Education.

404 Student Teaching Grades 7-8 (6) Student teaching in grades 7-8 for a minimum of 7.5 weeks. Must be taken with TCED 401 and AGED 405. Prereq: Admission to Teacher Education, TCED 301-302 and AGED 310.

405 Student Teaching in Grades 9-12 (6) Supervised student teaching in grades 9-12 for a minimum of 7.5 weeks. Must be taken with TCED 401 and AGED 404. Prereq: Admission to Teacher Education, TCED 301-302 and AGED 310.

430-440 (630-640) Problems in Improvement of Instruction (3, 3) Registration in special conferences, workshops, or inservice programs. These courses will be conducted by the Agricultural Education staff on campus or at selected off-campus centers and will be offered at times convenient to the students.

450-460 (650-660) Problems in Agribusiness and Natural Resources Education (3, 3) Registration in off-campus occupational experiences, short courses, or inservice programs. These courses will be conducted by the Agricultural Education staff on campus or at selected off-campus centers and will be offered at times convenient to the students.

470 (670) Problems in Agricultural Education (1-3) A course designed to deal with teaching and/or related problems. An elective course for seniors and graduate students. May be repeated for a maximum of 9 hours credit.

740 Seminar in Vocational Agriculture for First-Year Teachers (3) Assistance in adjustment to situation in which employed. Seminars to be held in selected centers with visits by instructor to each student at his/her teaching station. Students to participate in special activities selected by the instructor. Prereq: Employment as a vocational agriculture teacher.

741 Supervision of Student Teaching in Agriculture (3) A study of the objectives and techniques of supervising student teachers; experiences to be provided; rewards; facilities; relationships.

770 Program Development for Agricultural Mechanics Instruction (3) Development of instruction and managerial competencies needed in conducting agricultural mechanics programs through an in-depth study of program components and activities related to each, including skills development for FFA contest.

771 Program Development for Future Farmers of America Instruction (3) Development of instructional and managerial competencies needed in conducting Future Farmers of America programs including the related programs of Alumni and Young Farmers through an in-depth study of program components and activities related to each.

Agricultural Engineering Technology (AGET)

110 Introduction to Agricultural Engineering (3) Survey of basic engineering principles and terms. Engineering applications in agriculture. Two one-hour lectures and one two-hour lab. Prereq: Students must have satisfied entrance requirements in mathematics.

210 Internal Combustion Engines (3) Design features and performance characteristics of internal combustion engines for agricultural applications. Survey of factors affecting performance of spark
ignition and compression ignition engines. Operation, adjustment and repair of single cylinder spark ignition engines emphasized in lab. Two one-hour lectures and one two-hour lab. Coreq: MATH 140.

220 Surveying and Soil and Water Engineering (3) Fundamentals of surveying to include measurements of angles and distances, leveling, topographic surveys and mapping. Application of surveying information to soil and water engineering. Integration of engineering hydrologic and agronomic information in planning facilities for soil and water conservation. Two one-hour lectures and one two-hour lab. Coreq: MATH 140.

301-302 Special Problems (1, 1) Independent study project in the areas of soil and water, power and machinery, structures, or electric power and processing. Emphasis on application of engineering principles for solution of a problem or design of a project of special interest to the student. Preparation of a written project outline and report of results required. Taught only by arrangement prior to registration.

310 Food Engineering Technology (3) Selected principles of thermodynamics and fluid mechanics pertaining to food processing operations; application of engineering principles to processing methods involving drying, evaporation, fluid handling, heating, cooling and materials handling. Two one-hour lectures and one two-hour lab. Prereq: MATH 140 and PHYS 211 or instructor's approval.


354 Advanced Land Surveying and Geomatics (3) Principles of the Global Positioning Systems (GPS), mapping surveys, mapping, astronomical observations, control surveys and geodetic reductions, state plane coordinates, boundary surveys, surveys of public lands, construction surveys, horizontal curves, vertical curves, volumes, photogrammetry and an overview of geographic information systems. Two lecture hours and one three-hour lab. Prereq: ENGR 350 (Same as CIEG 354)

370 Agricultural Mechanics Shop (3) Organizing and planning agricultural shops. Tools, equipment and fabrication methodologies for wood, metals and other common materials. One-hour lecture and two two-hour labs.

401-402 (601-602) Research Participation (3, 3) Selection, analysis, solution and report of a problem in soil and water, power and machinery structures, or electric power and processing with emphasis on the scientific methods of inquiry. Preparation of project outline and presentation of written and oral reports required. Taught only by arrangement prior to registration. Prereq: Senior standing and minimum GPA of 2.75.


454 Land Surveying with GPS (3) Land surveying techniques and methodologies using survey-grade Global Positioning Systems (GPS). Topics include: the GPS signal, biases and solutions, GPS receivers and GPS surveying methods (static, differential GPS (DGPS), kinematic, pseudokinematic, rapid static, on-the-fly and real-time kinematic (RTK)), coordinates, planning a GPS-based survey, observing (equipment, reconnaissance, monumentation, logistics) and postprocessing. Techniques for proper utilization of RTK and DGPS. Two hours lecture and one two-hour lab. Prereq: AGET 354 or CIEG 354. (Same as CIEG 454)

456 Boundary Control and Legal Principles (3) Role of the surveyor in boundary establishment, creating GLO boundaries, creating nonsectionalized boundaries, locating easements and reversions, resurveying and retracing sectionalized lands, locating sequential conveyances, locating simultaneously created boundaries and locating combination descriptions and conveyances. Fundamentals associated with the ownership, transfer and description of real property; federal and state nonsectionalized land surveys; and riparian and littoral boundaries. Surveyor ethics, liability and professionalism. Two hours lecture and one two-hour lab. Prereq: AGET 354 or CIEG 354. (Same as CIEG 456)
458 Subdivision Site Planning and Development (3) Physical elements of designing land subdivisions including: sustainability and site design, site analysis, site grading (soil properties, slope stability, erosion and sediment control), designing for people, street and parking lot design, infrastructure (cul-de-sac design, parking lot design, streets, etc.), landscape restoration (wetlands, streams, vegetative cover, erosion damage, brownfield redevelopment, etc.), site layout, vegetation in the site plan, project management issues, historic landscapes and preserving the land and landscape and culture. Two lecture hours and two-hour lab. Prereq: AGET 354 or CIEG 354 (Same as CIEG 458)

460 (660) Waste Management Technology (3) Systems for utilization or disposal of waste. Waste characteristics and treatment methods. Pollution control. Two one-hour lectures and one two-hour lab. Prereq: MATH 160 and BIOL 120.

482 (682) Precision Technologies for Agriculture and Natural Resource Management (3) Principles and applications of technologies supporting agriculture and natural resource data management and planning. Topics include global positioning systems (GPS), remote sensing, GIS, data layering and software packages for management. Two hours lecture and two hours lab. Prereq: consent of the instructor.

710 Safety and Ergonomic Sciences in Agriculture (3) Designing, fitting, and adjusting equipment and tools to suit individuals so that agricultural tasks can be done safely, efficiently, productively and without discomfort, pain, injury and disability; includes comfort and well-being.

720 Advanced Soil and Water Conservation Engineering (3) Engineering principles for hydrologic analysis and design for small catchments including: hydrologic frequency analysis, rainfall runoff estimation, open channel hydraulics, hydraulics of control structures, sediment properties and transport, erosion and sediment yield, sediment control structures, groundwater, monitoring of hydrologic systems and hydrologic modeling. Students are required to complete a written term report on a current topic associated with soil and water engineering.

760 Comprehensive Nutrient Management Planning and System Design (3) Application of agronomic sciences and engineering technology for developing Comprehensive Nutrient Management Plans (CNMPs) for livestock production. Elements include: environmental law and regulatory policy; watershed planning considerations; animal waste characteristics; role of soils; role of plants; geologic and ground water concerns; facilities location; waste treatment systems design; land application of wastes; and agricultural waste management system design.

782 Advanced Precision Technologies for Agriculture and Natural Resources Management (3) Principles and applications of technologies supporting farming and natural resource data management and planning. Topics include internet information access, positioning systems (GPS), remote sensing, yield monitoring and mapping, variable rate technologies, data sampling, automated guidance, GIS, data layering and software packages for management. Three one hour lectures.

784 Agricultural Systems Science (3) Analysis and optimization of systems for agricultural production and processes; simulations by mathematical models of discrete and continuous biological and biochemical systems, single server queuing, mathematical programming and search techniques for agricultural processes.

785 Decision and Information Systems in Agriculture (3) Computerized decision systems for agriculture, expert systems, decision support systems simulations, subjective probability and utility theory and types of applications in agriculture. Impact of technology on the agricultural organization, including topics of problem agricultural organization and complexity, database management, operation systems, data communication and privacy.

Agriculture (AGRI)

120 Science & Technology of Agriculture and Natural Resources (3) This course will provide an overview of career opportunities in agriculture and natural resources management; an identification of key principles of, and interrelationships between, agriculture and natural resources; and current sci-
ence and technology applications within agriculture and natural resources management.

180 Topics in Agriculture [Topic title] (1-3) Study of special topics, lab, or field experiences at an introductory level. Topics include, but are not restricted to: Agricultural Economics, Animal Science, Plant and Soil Science, Agricultural Education, Agricultural Engineering Technology, Natural Resources Management, Chemistry, Physics, Biology. This course may be repeated for credit with adviser’s approval. The course is graded pass/fail. (Same as NRM 180.)

230 Travel Studies in Agriculture and Natural Resources (1-3) Travel course to study topics in Agriculture and Natural Resources either domestic or international. Requires travel to another region or country and presentation of oral and written reports. May be repeated one time for credit. Prereq: Instructor’s approval. (Same as NRM 230)

250 Issues in Alternative Agriculture (3) A study of alternative agriculture; including biofuels, organic agriculture, biotechnology, value-added agriculture and agri-tourism as they relate to the agriculture complex. Special emphasis will be given to the scientific and economic impacts to society. Students will be given a broad understanding of the relationships between agriculture and natural resource use.

275 Agricultural Communications (3) Introduction to the field of agricultural communications, journalism and public relations with a focus on programs, activities, careers, trends, publication development, layout, artwork, design and writing.

295 International Food and Fiber Systems (3) A study of the influence of food and fiber systems on the economy, environment, health, life style and political systems throughout the world. The impact of cultural differences, gender and institutions on international food and fiber systems is discussed. Course provides students with a global perspective on current issues related to international food and fiber.

390 Career Planning in Agriculture (2) Assessment of personal and academic potential for professional careers by the Agriculture and Natural Resources Management graduate. Efforts directed toward preparing for, interviewing and securing a position. Critiques of related extra curricular events. Survey of the history, philosophy and ethics of Agriculture and Natural Resources Management and crucial issues affecting agriculture and natural resources. Students are required to write reports and present professional oral presentations. Prereq: Junior standing. (Same as NRM 390)

411 Fundamentals of Cooperative Extension (3) History, philosophy and organizational structure of the Cooperative Extension Service, major areas of program emphasis, teaching methods used and relationships with other educational agencies. (Same as FCS 411)

420 Supervised Field Experience (3, 4) Minimum of one semester (or two semesters for four hours credit) of supervised study and experience with a business or agency and/or a specific aspect of its operations is required. Prior approval of arrangements with cooperating employer is necessary. Joint evaluation by on-the-job and academic supervisors.


450 (650) Dynamics and Development of Leadership in Natural Resources Management (3) A study of the dynamics, strategies and parliamentary procedure skills needed by leaders of occupational, civic and social organizations. Practical approaches through group interactions and participation. A detailed examination of organizations and individuals within organizations. Students are required to write reports and give oral presentations. Prereq: Junior standing. (Same as NRM 450/650)

701-702 Master’s Thesis (3, 3) Thesis proposal and research; thesis writing, presentation and defense. May repeat enrollment. P/N only.

732 International Travel Study (3) International travel course to study topics in agriculture or natural resources. Requires travel to another country, oral and written reports.
Statistical Methods in Agriculture and Natural Resources (3) Statistical techniques used in design and analysis of experiments in agriculture and natural resources management. T-tests, analysis of variance, mean separation, regression and correlation, experimental design and analysis, interpretation of research results, analysis and interpretation of survey information. Prereq: MATH 210 or equivalent or instructor’s approval.

Topics in Agriculture and Natural Resources Management (Selected Area) (1-6) Topics in selected areas of agriculture and natural resources. For graduate students in the Master of Science in Agriculture and Natural Resources Systems Management program. Can be used to meet requirements in the MSANR curriculum. The subject matter area is indicated by the third digit: 0 for Agriculture, 1 for Agricultural Economics, 2 for Agricultural Engineering Technology, 3 for Animal Science, 4 for Natural Resources Management, 5 for Plant and Soil Science. May repeat enrollment up to six credit hours. Prereq: Graduate Coordinator and instructor’s approval.

Research/Internship in Agriculture (1-3) This will be either: 1) a major research project associated with agriculture, or 2) a supervised work experience in agriculture for a minimum of three months (requires weekly reporting from student and a final report from the immediate supervisor). Research projects shall include: a review of literature, data collection methodology, data presentation and a final written report. May repeat enrollment. No more than three semester hours credit will be counted toward requirements for the MSANR degree. P/N only.

Animal Science (ANSC)

Introduction to Animal Science (3) Fundamental principles of animal agriculture. Biological and scientific aspects of development, inheritance and feeding. Animal products and scope of the animal industry.

Introduction to Animal Science Laboratory (1) Provides a lab experience for training students in the basic concepts of livestock production and husbandry. Students will identify major breeds of livestock, determine daily feed requirements, study basic principles of livestock anatomy and external part nomenclature and observe basic behavioral characteristics of animals produced for food, fiber and recreation. Includes principles of animal health and welfare. Field trips to commercial production facilities. One two-hour lab. Coreq: ANSC 110.

Western Horsemanship (3) A review of western horsemanship and horse safety. Includes instruction in handling, grooming, saddling, bridling and mounting. Development of basic riding skills at the walk, jog and lope.

Introduction to Horse Science (3) An introductory course that surveys the breeds of horses and scope of the industry. Course modules will focus on selection, feeding, disease control, breeding and reproduction, health and welfare, tack and equipment, facilities, transportation and fundamental management practices. Two one-hour lectures and one three-hour lab.

Exotic and Companion Animal Management (3) A survey of the basic principles involved in the care and management of exotic and companion animal species. Particular emphasis will be on nutrition and feeding programs, breeding cycles, vaccination programs and diseases of exotic and companion animals generally regarded as household pets. Two one-hour lectures and one two-hour lab.

Live Animal and Carcass Selection and Evaluation (3) Evaluation and selection techniques for live animals based on economic merit. Principles of selection and grading of beef, swine and sheep. Relationship of live animal traits to carcass merit. Presentation of oral reasons. Students representing the university in the Spring Intercollegiate Livestock Judging Contests will be chosen from this course. Two three-hour labs.

Behavior and Welfare of Farm and Companion Animals (3) An introduction to animal behavior and welfare and ethical issues in the animal industry. Behavioral topics will focus on the development of behavior, communication, learning, social
structure, and sexual, maternal, feeding, aggressive and stereotypic behaviors in domestic farm and companion animals. The second half of the course will focus on philosophies related to animal welfare, myths and facts, animal and human relationships, issues related to animal welfare and animal activism. Two one-hour lectures and one two-hour lab. 

**Prereq: ANSC 230.**

### 301-302 Special Problems (1, 1)
Individually supervised project for students showing special interest in some phase of animal science. Topics may be selected from nutrition, breeding or selection, physiology, management, or meat science. Written project outline required. Maximum of one hour applicable to concentration requirements. Taught only by arrangement prior to registration.

### 305-306 Practicum in Animal Science (2, 2)
Application of principles of livestock management, animal nutrition and animal breeding in cooperation with the UT Martin Agricultural Experiment Station, the UT Martin Farm and local private farms. Students will be required to work a minimum of six (6) hours per week under supervision of instructor and cooperating farms. Written report required. May not be substituted for any required Animal Science course. 

**Prereq: Junior standing and consent of instructor.**

### 320 Farm Animal Health (3)
Principles of etiology, pathology, symptomatology, diagnosis and suggested treatment as applied to common viral, bacterial and parasitic diseases of livestock. Topics to be emphasized include herd immunization programs, sanitation, quarantine, herd health programs and economic aspects of disease control. 

**Prereq: CHEM 112 or 122, and MBIO 251.**

### 330 Basic Meat Science (3)
Principles of the science of muscle tissue and its conversion to fresh meat. Study of the anatomy and biochemistry of muscle tissue. Physiological function of muscle in the animal. Properties of fresh and processed meats. Preservation of meat and meat products and the fabrication of beef, pork and lamb carcasses into retail cuts and selected processed cuts. 

**Prereq: BIOL 120 or 140, and CHEM 111 or 121 or concurrent enrollment.**

### 350 Animal Nutrition (3)
A comprehensive course in animal nutrition. The course will focus on basic concepts in anatomy, physiology and biochemistry as they relate to digestion, absorption and metabolism of nutrients and other compounds in animal feedstuffs; and the use of feed additives to enhance nutrient utilization, animal health and well-being. The course will also focus on applied concepts related to feedstuff identification, feed processing, analysis and use in practical diet formulation and feeding systems for livestock, horses and companion animals. Three hours lecture. 

**Prereq: BIOL 120 or 140, and CHEM 112 or 122.**

### 351 Animal Nutrition Laboratory (1)
Application of principles learned in Animal Nutrition (ANSC 350). This is a lab based course designed to give students some practical experience in feedstuff identification and utilization, feed processing and analysis, feed formulation and feeding management as it relates to feeding livestock, horses and companion animals. One two-hour lab. 

**Coreq: ANSC 350.**

### 360 Breeding and Improvement of Farm Animals and Poultry (3)
Application of genetic principles to breeding and improvement of farm animals and poultry. Role of selection, inbreeding, outbreeding and crossbreeding as related to development of breeding plans for each major species of farm animals and poultry. 

**Prereq: BIOL 110 or 130 or equivalent.**

### 371 Anatomy and Physiology of Domestic Animals (4)
The study of the anatomy and physiology of domestic animals. Basic principles of physiological and functional organization of nervous, endocrine, muscular, respiratory, circulatory, renal and immune systems. Control, regulation and manipulation of organ development and function in domestic animals will be studied as it relates to improving production efficiency, maintaining health and improving animal welfare. Written reports will be required. Three one-hour lectures and one two-hour lab. 

**Prereq: BIOL 110 and 120, or BIOL 130 and 140, or permission of instructor.**
372 Applied Animal Reproduction (3) Anatomy and physiology and reproduction including: endocrinology, reproductive cycles, fertilization, gestation, fetal development, parturition and lactation. Techniques for improving reproductive efficiency include: semen evaluation, artificial insemination, synchronization of ovulation, pregnancy diagnosis and embryo transfer. Two one-hour lectures and one two-hour lab. Prereq: BIOL 110 and 120, or BIOL 130 and 140, or permission of instructor.

380 (580) Livestock Merchandising (3) Principles and activities involved in promoting and merchandising seedstock, including advertising, photography and ad copy layout, animal selection and preparation and utilization of performance records. Presentations by industry and breed association leaders. Includes field trips to seedstock operations and auctions. Two one-hour lectures and one two-hour lab. Prereq: Junior standing and permission of instructor.

400 International Studies in Animal Agriculture (3) A study of the relationship of American animal agriculture to similar enterprises in Great Britain and other members of the European Common Market. Particular emphasis on marketing strategies for red meat and poultry products and differences in consumer attitudes. Includes field trips to production farms, processing facilities, markets and governmental agencies. Opportunity to experience and visit historical sites of interest, especially the origin of common breeds of meat animals. Investigations into the influence of European attitudes toward animal welfare practices and diet-health issues. Requires five-week summer study session in Great Britain for completion and credit. Enrollment by permission of instructor only. May be repeated once for credit.

401-402 (601-602) Research Participation (3, 3) Research project involving supervised independent study in a specialized area. Topics may be selected from nutrition, breeding or selection, physiology, management or meat science. Maximum of three hours applicable to concentration requirements. Presentation of written project outline and written and oral reports of results required. Taught only by arrangement prior to registration. Prereq: Senior standing and minimum GPA of 2.75.

410 (610) Beef Sciences (3) Feeding, management and health of the beef herd. Emphasis on production records, marketing technology and consumer affairs. Two one-hour lectures and one three-hour lab. Prereq: Junior standing in Animal Science or Pre-Vet options or permission of instructor.

420 (620) Swine Science (3) Programs in breeding, feeding, management, marketing and methods of production. Trends in production, processing and consumption. Research results. Trips to swine farms, feeding operations and markets. Progressive look at the swine industry focusing on management programs in areas of production, including selection, breeding, feeding, health, facilities, and environmental management, and strategies utilized in contracting, marketing and the value-added processing of pork. Information on consumer food preferences, current swine research, societal concerns and industry practices will be used along with trips to swine farms and related industries to reinforce best management practices in the swine industry. Two one-hour lectures and one three-hour lab. Prereq: ANSC 350; Junior standing in Animal Science or Pre-Vet options or permission of instructor.

430 Stable Management (3) Integration of principles of anatomy and physiology, nutrition, genetics, reproduction and ethology into a comprehensive, advanced program of horse production and stable management. Aspects of stable management will relate to practical horse care, management strategies for different equine enterprises, record keeping, equine insurance and legal issues and business promotional strategies. Course will include visits to, and analysis of, regional equine businesses. Students will participate in management of the UT Martin teaching farm stable. Two one-hour lectures and one two-hour lab. Prereq: Junior standing or permission of instructor.

440 (640) Sheep and Goat Production (3) Principles of nutrition, management, genetics, reproduction and health of sheep and goats. Emphasis on production records, marketing technology and consumer affairs. Information on current sheep and goat research, social concerns and industry practices will be used along with trips to sheep and goat operations.
Animal Science / Anthropology

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442 Advanced Meat Animal Evaluation and Livestock Selection (3) Advanced techniques of evaluation of market swine, beef cattle and sheep. Selection of breeding animals for functional efficiency. Use of performance records in selection of breeding stock. Livestock judging team coaching techniques and techniques used in judging livestock shows will be discussed. Preparation for the National Intercollegiate Livestock Judging Contest. Field trips and presentation of oral reasons. Two one-hour lectures and one three-hour lab. Prereq: ANSC 441 and instructor's approval.

451 Equine Selection and Evaluation (2) Techniques related to the selection and evaluation of working and pleasure horses. Includes analysis for functional efficiency and presentation of oral reasons. Requires numerous field trips and participation in Intercollegiate Horse Judging Competitions. One three-hour lab. May be repeated one time. Prereq: Permission of instructor and eligibility for intercollegiate competition.

470 Poultry Science (3) Principles of production and management of the poultry flock, including broilers, layers and turkeys. Incubation and hatchery management, brooding and rearing, houses and equipment, feeding, health, processing, marketing, breeding, records, waste management. Current research results, field trips. Two one-hour lectures and one two-hour lab. Prereq: Junior standing in Animal Science or Pre-Vet options or permission of instructor.

Anthropology (ANTH)

101 Introduction to Anthropology (3) An overview of anthropology including the four major subdivisions of the discipline: archaeology, linguistics, physical anthropology and social/cultural anthropology.

300 Cultural Anthropology (3) An examination of theory and method in cultural anthropology as used in the analysis of multicultures. Case studies from different ethnographic settings provide the primary source material. Prereq: ANTH 101, SOC 201, or instructor's approval. (Same as SOC 300)

304 (504) Race, Class and Power (3) Description of stratification patterns, functions and dysfunctions of such patterns, conflicts generated by race and class and possible ways of resolving problems associated with race/class differences. Prereq: SOC 201. (Same as SOC 304/504)

306 (506) Religion and Society (3) Interrelationships of society, culture and religion. Prereq: SOC 201. (Same as SOC 306/506 and RLST 306)

341 (541) Men and Women: Gender Roles in American Society (3) An examination of how gender is socially produced and the implications of gender for individuals, social processes and social structure. Prereq: SOC 201. (Same as SOC 341/541 and WMST 341)

381 (581) Special Topics (3) Selected topics of current interest in sociology and/or anthropology. Course may be repeated with different topics. Maximum of six hours of topics/courses can be counted toward the major or minor. (Same as SOC 381/581)

400 Culture and Industry (3) An examination of industrial systems in non-Western societies. Emphasis will be placed upon identifying significant cultural traits and assumptions that operate to distinguish Western and non-Western industry. Prereq: ANTH 101, SOC 201, or instructor's approval. (Same as SOC 400)
404 Social Stratification (3) An emphasis is made upon the class system of the United States with some comparisons to stratification systems of other times and societies. Theory and research appropriate to the analysis of structured social inequality are surveyed. Prereq: SOC 201 or ANTH 101, and SOC 202 or 208. (Same as SOC 404)

455 Anthropology Travel Study [Selected Topics] (1-3) A course designed as an educational travel experience in Anthropology within the United States or internationally under the supervision of a university instructor. May be taught as an organized study-tour or as an independent travel and study project. Topics, prerequisites and course requirements announced in advance. May be offered on a pass/fail basis. Students may repeat course with different topics. Not regularly offered. Prereq: instructor's approval.

485 Directed Reading and Research (3) A systematic sociological/anthropological study of a selected topic through supervised reading of pertinent substantive and methodological literature, primary data collection or use of secondary data and statistical analysis of data by a Sociology/Anthropology faculty. Maximum of 6 hours of primary topic research or different topics can be counted toward major or minor. By arrangement only. Prereq: ANTH 101 or SOC 201, an additional 3 credit hours Sociology/Anthropology course, minimum cumulative GPA of 3.00, and instructor's approval of topic and research methods. (Same as SOC 485)

495 (695) Comparative Family Systems (3) An examination of families both cross-culturally and historically. Attention is directed to understanding the variation and similarities in family structures, marital arrangements, premarital relations, gender roles and socialization. Prereq: SOC 201. (Same as SOC 495/695 and WMST 495)

Art (ART)

110 Understanding Visual Art (3) (TBR: ART 1030) An introduction to the aesthetic principles of visual art as exemplified in selected masterpieces.

110H Honors Understanding Art (3) An introduction to the visual arts through studying terminol-ogy, history, theory and criticism. For students in good standing in Honors Programs.

221 Two-Dimensional Design (3) Application of basic principles in creating two-dimensional designs. Planning and rendering displays, graphic design and lettering.

222 Three-Dimensional Design (3) Studio projects are concerned with the elements and composition of form and mass in three-dimensional space. Prereq: ART 221 and 241.

241 Drawing (3) Placement, scale, perspective, composition and other problems involved in representing forms and objects in two dimensions.

242 Drawing II (3) Advanced study of placement, scale, perspective, composition and other problems involved in representing forms and objects in two dimensions. May be repeated for credit. Prereq: ART 241.

260 Using Color (3) Effective use of color in two- and three-dimensional design. Interaction of color as well as historical and psychological aspects. Prereq: ART 221.

305 Photography (3) Introduction to camera and darkroom techniques for small format, black and white photography. Lecture and lab.

310 Fibers (3) Introduction to a variety of fibers techniques including paper making, felting, hand looms and basic floor loom weaving. Creativity, experimentation of design and quality of craftsmanship are emphasized.

311 Painting (3) Skills and techniques in the use of oils, acrylics and water colors. Prereq: ART 221, 241, and 260.

312 Painting II (3) Advanced skills and techniques in the use of oils, acrylics and water colors. May be repeated for credit. Prereq: ART 311.

322 Professional Issues in Visual Art (3) Professional aspects of art and the pursuit and management of a career in art. A study of galleries, museums and art fields dealing with aspects of exhibiting and selling work and portfolio development.

331 Jewelry (3) Techniques in jewelry design and finishing.
335 Ceramics (3) Methods of structuring clay objects including hand-build and wheel-throwing techniques, glazing and firing methods.

351 Sculpture (3) Compositional study of three-dimensional form with emphasis on basic sculptural concepts, terminology and techniques. Prereq: ART 221 and 222 or instructor's approval.

352 Sculpture II (3) Advanced study of three-dimensional form with emphasis on refining an understanding of sculptural concepts, terminology and techniques. May be repeated for credit. Prereq: ART 351.

360 Clay Sculpture (3) Exploration of various clay sculpture processes. Advanced hand-building techniques, glaze and surface techniques. Makes use of slab roller extruders. Students will participate in kiln firing and glaze mixing.

365 Clay Sculpture II (3) Advanced study of sculptural concepts, terminology and techniques as related to clay. Focus on mold-making and figurative work. May be repeated for credit. Prereq: ART 360.

391 (591) Special Topics in Art (3) Selected media and/or genre for intensive study. Topics and prerequisites to be announced. May be repeated for credit.

411 Mixed Media (3) Development of wet and dry mixed media techniques to include collage, painting, printmaking and other methods of combining media to expand the student's conceptual and technical abilities. Prereq: ART 260.

412 Advanced Mixed Media (3) Advanced techniques to express the student's intent. Media may include wet and dry media, collage, construction, installations and performance. Prereq: ART 411.

420 Printmaking (3) An introduction to basic concepts and techniques of printmaking. Prereq: ART 221 and 242.

425 Advanced Printmaking (3) Advanced studio exploration in various printmaking media to include working beyond the printed image. Prereq: ART 420.

435 Advanced Ceramics (3) Advanced studio work in specific ceramics skills involving handbuild-

441 Weaving (3) Understanding the weaving process including threading a loom, winding a warp, draft reading, loom assembly and the weaving of experimental patterns.

445 Glaze Calculations for the Potter (3) Glaze chemistry, theory and calculation. Formulating, mixing and testing a variety of glaze formulas on various clays. Prereq: ART 335.

451 Figure Drawing (3) Drawing from live human models in charcoal, pencil and other materials. Prereq: ART 241 and 242.

452 Figure Drawing II (3) Advanced study of drawing from live human models in charcoal, pencil and other materials. Prereq: ART 451.

460 Senior Thesis Exhibition (3) The preparation for and exhibition of works produced as a culmination of the student's studies at UT Martin, focusing on their area of emphasis. Course will include portfolio and résumé development and juried exhibition participation. The exhibit will be scheduled during the senior year under the supervision of the art faculty.

Art Education (ARTE)

211 Introduction to Teaching Art (2) A comprehensive view of art teaching as a profession including requirements, challenges and opportunities. The stages of children's development in art will be covered, as well as lesson plan writing. Includes eight (8) clock hours of clinical lab experiences, directed observations and limited participation in classroom settings.

360 Teaching Art in the Public School (3) Approaches to art studio experiences appropriate for both elementary and secondary students, including work developing an art curriculum. Includes 12 clock hours of clinical lab experiences, directed observations and limited participation in classroom settings. Prereq: ARTE 211.
400 Senior Seminar in Art Education (3) Current issues in the profession of art education, review of national standards and the relationship of aesthetic education to the overall development of young people. Historical, philosophical, psychological and social aspects of art in the curriculum. Measurement and evaluation of art instruction. Includes 10 clock hours of clinical lab experiences, directed observations and limited participation in classroom settings. The senior exhibit for art education emphasis students will be a component of this course. Prereq: ARTE 360.

471 Student Teaching in Art - Grades K-6 (6) Supervised student teaching of art in grades K-6 in off-campus centers for a minimum of 7.5 weeks. Must be taken concurrently with ARTE 473. (Normally taken concurrently also with ARTE 472.) Prereq: Admission to Teaching Education, TCED 301-302, and all other required courses in the Professional Education core.

472 Student Teaching in Art - Grades 7-12 (6) Supervised student teaching of art in grades 7-12 in off-campus centers for a minimum of 7.5 weeks. Must be taken concurrently with ARTE 473. (Normally taken concurrently also with ARTE 471.) Prereq: Admission to Teacher Education, TCED 301-302, and all other required courses in the Professional Education core.

473 Seminar in Teaching Art (1) Structured seminar for advanced discussion of instructional and classroom management, variety in methodology, discipline, school law, professionalism and related topics. Emphasis will be placed on oral expression and written communication. Coreq: ARTE 471-472 (student teaching courses.)

Art History (ARTH)

210-211 The History of Art (3, 3) (TBR: ART 1010-1020) These two courses provide a global perspective in the development of visual art, through a survey of representative cultures, styles, artists and works. 210: Paleolithic era through the 16th Century. 211: 17th Century to the present.

320 History of Graphic Design (3) Studies in the Development of Visual Language and Communication through Graphic Arts and Design. This course will concentrate on Graphic Design through various historical periods.

330 Visual Traditions of Non-Western Cultures (3) An examination of the visual traditions of numerous historical and contemporary non-Western cultures. Primary attention will be paid to the art of Africa, Asia and the Americas.

340 Art of the Classical World and Western Traditions (3) An investigation of the European classical tradition beginning with the ancient Greeks and Romans. This course will also look at the revival of the classical in 18th century and 19th century Europe and the United States.

350 Women in the Arts (3) A specialized study of women artists and their work in a historical context. Issues impacting the role of women artists, women as art subjects and the question of a feminine aesthetic will be analyzed. (Same as WMST 350)

391 Special Topics in Art History (3) Selected topics for intensive study. Topics and prerequisites to be announced. May be repeated for credit.

410 Contemporary Art (3) This course will provide an exploration of contemporary art, artists and art movements of the 20th and 21st centuries. Modernist and Postmodernist styles/movements will be investigated in the context of the art world from a global perspective.

Astronomy (ASTR)

201-202 Astronomy (4, 4) An introduction to astronomy with a lab to illustrate data collection and analysis in astronomy. 201: theories of the solar system from models for ancient calendars to data from recent space probes and an introduction to the optics of the eye and telescope. 202: evolution of main sequence stars, neutron stars, black holes, structure of the galaxy and theories of cosmology. It is recommended that the courses be taken in sequence. Three hours lecture and two hours lab.

Athletic Training (ATRN)

300 (500) Prevention of Athletic Injuries (3) Development of a basic understanding of athletic injuries to include pre-participation examination guidelines, risk factors, strength, endurance, body
composition, environmental conditions, protective devices, maintenance of athletic equipment and facilities. Prereq: Admission to the Athletic Training Education Program; ZOOL 201 or 251 or permission of the instructor. Taught only in the fall.

301 Evaluations of the Lower Body (3) Evaluation of injuries that occur to the lower body, to include a review of the associated anatomy, etiology, special tests for differential assessment, immediate action plan and a referral plan. Prereq: ATRN 300, ZOOL 201 or 251 or permission of instructor. Taught only in the fall.

302 Evaluations of the Upper Body (3) Evaluation of injuries that occur to the upper body to include a review of the associated anatomy, etiology, special tests for differential assessment, immediate action plan and a referral plan. Prereq: ATRN 301, ZOOL 201 or 251 or permission of instructor. Taught only in the fall.

307 (507) Athletic Training Techniques (3) This course is an introduction to prevention and care techniques from the profession of athletic training. The student will develop the skills to perform taping, wrapping and splinting procedures, be exposed to protective equipment, monitoring vital signs, wound care and application of modalities.

310 Athletic Training Clinical-Level I (1) This course is designed to offer student clinical and lab experiences which emphasize the entry level Athletic Training Educational Competencies addressed in ATRN 300 and other required classes. A minimum of 200 hours must be completed under the direct supervision of an Approved Clinical Instructor. Prereq: Admission to the Athletic Training Education Program and student must be a Department of Health and Human Performance major.

311 Athletic Training Clinical-Level II (1) This course is designed to offer student clinical and lab experiences which emphasize the entry level Athletic Training Educational Competencies addressed in ATRN 302 and other required classes. A minimum of 200 hours must be completed under the direct supervision of an Approved Clinical Instructor. Prereq: ATRN 310 and student must be a Department of Health and Human Performance major.

312 Athletic Training Clinical-Level III (1) This course is designed to offer students clinical and lab experiences which emphasize the entry level Athletic Training Educational Competencies addressed in ATRN 301 and other required classes. A minimum of 200 hours must be completed under the direct supervision of an Approved Clinical Instructor. Prereq: ATRN 311 and student must be a Department of Health and Human Performance major.

313 Athletic Training Clinical-Level IV (1) This course is designed to offer students clinical and lab experiences which emphasize the entry level Athletic Training Educational Competencies addressed in ATRN 400, 401 and other required classes. A minimum of 200 hours must be completed under the direct supervision of an Approved Clinical Instructor. Prereq: ATRN 312 and student must be a Department of Health and Human Performance major.

400 (600) Therapeutic Exercise (3) Development of the knowledge and the application of programs and techniques for rehabilitation of injuries to physically active people. Prereq: ATRN 301 or permission of instructor. Taught only in the spring.

401 Therapeutic Modalities (3) Development of knowledge and use of therapeutic modalities in the treatment of injuries to physically active people. Prereq: ATRN 301 or permission of instructor. Taught only in the spring.

402 Health Care Administration/Professional Development and Responsibility (3) This course is geared toward athletic training health care administration; includes medical records and documentation, legal and ethical issues, OSHA guidelines, organizational structure, drug testing and protocols, purchasing equipment, inventory, insurance, certification examination preparation, NATA background and information. Prereq: ATRN 400 or permission of instructor. Taught only in the spring.

491 Athletic Training Internship-Pathology (3) This course is designed to offer students clinical and lab experiences which emphasize the pathological conditions associated with athletic injury and illness. A minimum of 250 hours must be completed under the direct supervision of an Approved Clinical Instructor. Prereq: ATRN 313.
492 Athletic Training Internship-Senior Capstone (3) This course is designed to offer students clinical and lab experiences which emphasize the review of athletic training skills and procedures to accentuate the critical thinking and independent application of previously completed competencies and proficiencies. A minimum of 250 hours must be completed under the direct supervision of an Approved Clinical Instructor. Prereq: ATRN 491.

700 Advanced Sport Medicine (3) An in-depth study of the prevention of injury, including physical preparedness, equipment and playing fields, full scope of emergency medical plans and environmental hazards. Study of catastrophic and life threatening injuries and recognition of signs and symptoms.

Biochemistry (BCHE)


419 (619) Biochemistry Laboratory (1) Lab exercises related to topics covered in BCHE 411. Prereq or Coreq: CHEM 320 and BCHE 411.

Biology (BIOL)

110 Introductory Cell Biology and Genetics (4) (TBR: BIOL 1010 or 1110) An introductory course that emphasizes plant and animal cell structure, cellular processes and genetics. Three one-hour lectures and one two-hour lab. Students may not receive credit for both BIOL 110 and BIOL 140.

120 Introductory Plant and Animal Biology (4) (TBR: BIOL 1020 or 1120) A course in organismal biology with emphasis on the structure and function of plants and animals, including an introduction to the principles of ecology and evolution. This course requires field work involving physical activity. Three one-hour lectures and one two-hour lab. Students may not receive credit for both BIOL 120 and BIOL 130.

130 Principles of Biology I (4) (TBR: BIOL 1120) An introductory course designed for science majors that investigates the ecology, evolution and diversity of form and function of the organisms primarily in the Kingdoms Animalia and Plantae. Lab experiences include the collection, analysis and interpretation of zoological and botanical data. This course requires field work involving physical activity. Three one-hour lectures and one two-hour lab. Students should not attempt BIOL 130 unless the results of mathematics testing indicate placement in MATH 140 or a higher level course. Students may not receive credit for both BIOL 130 and BIOL 120.

140 Principles of Biology II (4) (TBR: BIOL 1110) An introductory course designed for science majors that investigates cell and molecular biology including biochemical processes, cellular function, genetics and the biology of microbes. Lab experiences include the collection, analysis and interpretation of cellular and molecular data. Three one-hour lectures and one two-hour lab. Prereq: BIOL 130. Students may not receive credit for both BIOL 140 and BIOL 110.

180 Special Topics in Biology (1-4) Lectures, field and/or lab work, discussions and readings in restricted topics in biology. Topics to be announced. Prereq: permission of instructor.

300 Medical and Scientific Vocabulary (2) The study of word derivations, especially as it relates to technical terms. The use of common prefixes, suffixes and combining forms to understand and effectively use scientific vocabulary. Prereq: Completion of at least one lab science sequence and Junior standing.

331 General Ecology (3) The study of the interactions of organisms with their physical environment and with each other. (This course is designed as a writing intensive course to meet the “writing across the curriculum” requirement.) Students will be required to use standard word processing, spreadsheet and presentation software in course assignments. Prereq: BIOL 110-120 or BIOL 130-140.

336 Introductory Genetics (3) Basic concepts of Mendelian and molecular genetics. Prereq: BIOL 110-120 or BIOL 130-140.
337 Cell Biology (3) Principles and concepts underlying the physiological and ultrastructural nature of bacterial, plant and animal cells. Cell organization and differentiation, osmotic relations, membrane transport, energy relations. Enzymes and basic intermediary metabolism, nucleic acids. Protein synthesis, excitability and mechanical work, meiosis and cytogenetic regulation of cellular activity and evolution of the cell. Three one-hour lectures. Prereq: BIOL 110-120 or BIOL 130-140, CHEM 121-122, and either CHEM 341 or CHEM 310 (and 319).

338 Cell Biology Laboratory (1) Experiments using current techniques to study different aspects of the cell and its function. Techniques include basic tissue culture, centrifugation, spectrophotometry, hemocytometry, histochemical staining, protein and DNA extraction and electrophoresis and column chromatography. One three-hour lab. Coreq/prereq: BIOL 337.

391 Organic Evolution (3) The history of evolutionary thought, the evidence for evolution and the nature of evolutionary processes. (This course is designed as a writing intensive course to meet the “writing across the curriculum” requirement.) Students will be required to use standard office suite software including word processing, spreadsheet and presentation programs in course assignments. Three one-hour lectures. Prereq: BIOL 110-120 or BIOL 130-140; BIOL 336 recommended.

410-411 Seminar in Biological Sciences (1, 1) Presentation of selected topics in advanced biology. Subject determined by the instructor. Active student participation including oral presentation of papers. Students will be required to use standard office suite software including word processing, spreadsheet and presentation programs in course assignments. Prereq: Junior standing, major in Biology or major in Secondary Education with endorsement in biological sciences, or instructor’s approval.

412 Wildlife Biology Seminar (1) Presentation of selected topics in Wildlife Biology with emphasis on waterfowl management. Active student participation including oral presentation of papers. Students will be required to use standard office suite software including word processing, spreadsheet and presentation programs in course assignments. Prereq: Junior standing, major in Biology or major in Wildlife biology, or instructor’s approval.

413 Wildlife Biology Seminar (1) Presentation of selected topics in Wildlife Biology with emphasis on fisheries management. Active student participation including oral presentation of papers. Students will be required to use standard office suite software including word processing, spreadsheet and presentation programs in course assignments. Prereq: Junior standing, major in Biology or major in Wildlife biology, or instructor’s approval.

418 (618) Limnology (3) An introduction to the study of inland waters and factors and processes that affect the nature of water. This course requires field work involving physical activity. Two one-hour lectures and one two-hour lab. Prereq: BIOL 110-120 or BIOL 130-140, and CHEM 111-112 or 121-122.

432 (632) Developmental Biology (3) Principles and concepts of fertilization, embryogenesis, organogenesis, prenatal development and postnatal development. Emphasis is on animal systems. Three one-hour lectures. Prereq: BIOL 110-120 or BIOL 130-140, and CHEM 121-122.

436 Molecular Biology (3) Molecular mechanisms and controlling elements of replication, transcription and translation as they relate to gene expression in prokaryotic and eukaryotic organisms. Special emphasis will be placed on the biological and social implications of technology, including the identification, cloning and recombination of genes. Prereq: CHEM 341 or CHEM 310 (and 319), and BIOL 336.

437 Molecular Biology Lab (2) Experiments designed to illustrate some of the basic principles of molecular biology, including sterile techniques for the handling of bacteria and bacteriophages, replica plating, DNA restriction analysis, bacterial transformation and recombination, purification of plasmid and bacterial DNA. Two two-hour labs. Prereq or Coreq: BIOL 436.
Ecological Methods (3) Introduction to common field techniques used to collect and analyze ecological data in terrestrial and aquatic ecosystems. This course requires field work involving physical activity. Two one-hour lectures and one three-hour lab. Prereq: BIOL 130-140 or BIOL 110-120; BIOL 331, BOT 431, or ZOOL 441.

Conservation Biology (3) An interdisciplinary introduction to conservation biology focusing on ecosystem conservation and restoration. This course will incorporate information from many areas in science including genetics, organismal biology, ecology and biogeography. Three one-hour lectures. Prereq: BIOL 110-120 or BIOL 130-140.

Research Participation (2, 2) Experience in active research projects under the supervision of faculty members. Taught by arrangement. Prereq: Junior or Senior standing, minimum average grade of 3.00 and research supervisor's approval prior to enrollment.

Special Topics in Biology (1-3, 1-3) Intensive lectures and/or lab work on special topics in biology. Prereq: Junior standing and Instructor's approval.

Field Investigations in Biology (3) Field work in selected environments with emphasis placed upon the interaction of the flora and fauna within that environment. Extended field trip utilizing facilities such as the Gulf Coast Research Laboratory. This course requires field work involving physical activity. Prereq: BIOL 110-120 or BIOL 130-140.

Botany (BOT)

Foundations of Botany (3) A study of the structure, function, diversity and significance of photosynthetic organisms from the cyanobacteria through the vascular plants, as well as major representatives of the fungi. Two lecture hours and two hour lab. Prereq: BIOL 110-120 or BIOL 130-140.

Plant Morphology (3) A study of the major groups of photosynthetic organisms with respect to comparative anatomy, reproductive patterns, development and phylogenetic relationships. Two lecture hours and two hour lab. Prereq: BIOL 110-120 or BIOL 130-140.

Plant Taxonomy (3) Principles of plant taxonomy. Classification of selected vascular plant families and the use of keys to identify common Tennessee species of vascular plants. This course requires field work involving physical activity. Two one-hour lectures and one three-hour lab. Prereq: BIOL 110-120 or BIOL 130-140.

Plant Function and Development (3) Interrelations between function and structure of vascular plants including nutrition, transpiration, transport, photosynthesis, respiration, flowering, growth and development and senescence. Two one-hour Lectures and one two-hour lab. Prereq: BIOL 110-120 or BIOL 130-140; CHEM 111-112 or CHEM 121-122.

Plant Ecology (3) Relations of plants to their environment with emphasis on climate and biotic factors influencing their structure, growth, behavior and distribution. Prereq: BIOL 110-120 or BIOL 130-140.

Plant Ecology Laboratory (1) Lab and field studies in the methods and principles of plant ecology. This course requires field work involving physical activity. One two-hour lab. Coreq: BOT 431.

Business Administration (BADM)

Practicum in Business (3) Field research of such topics as ongoing accounting system evaluation, financial management and control, personnel evaluation and administration and market and market analysis. Students are expected to diagnose organizational problems and recommend a business plan of action. Prereq: Senior or graduate standing.

Internship in Business Administration (1-9) Supervised experience in business establishments, institutions, or other organizations matched to the student's curriculum. Prereq: Dean's approval; at least Junior standing. May be repeated for up to a total of nine (9) hours internship credit. A maximum of six (6) hours may be used to fulfill degree requirements.
495 Executive Seminar (1) A study of current social and economic issues related to business. The course is taught by a company executive or high ranking official of an organization.

701 Research Methods and Communications (3) A project-oriented course focusing on philosophy, practical research methods and effective communication techniques. Includes qualitative and quantitative communication.

710 International Study (3) A travel study course emphasizing the problems and decisions facing managers of international businesses, the environment in which these businesses operate and ways of integrating the coordinating programs in diverse markets. Particular emphasis is placed upon recognition of relevant cultural factors which affect the manager’s decisions.

790-798 Special Topics in Business [Topic title] (1-6) An intensive study of selected topics of contemporary interest in the field of business. Maximum credit available for this course is six hours.

799 Independent Study in Business Administration [Topic title] (1-6) Special advanced research projects undertaken individually under the supervision of the faculty. Maximum credit available for this course is nine hours.

Business Education (BUED)

430 Instructional Strategies in Business Subjects (3) Materials, methods and evaluation procedures in accounting, basic business, data processing and office technology. Prereq: TCED 301 and 302 and admission to Teacher Education.

Business Law (BLAW)

201 Legal Environment of Business (3) A survey of law comprising the legal environment of the business community. Legal ethics, constitutional and administrative law, anti-trust law, product liability law, labor law, environmental law and international law.


302 Business Law II (3) Fundamental laws and concepts relating to corporations, sales of property, secured transactions, commercial paper and bankruptcy. Relevant provisions of the Uniform Commercial Code. Prereq: minimum grade of C in BLAW 201.

311 Employment and Labor Law (3) Analysis of the many federal, state and local laws which regulate the recruitment, selection, employment, promotion, pay and dismissal of employees.

401 Real Estate Law I (3) Legal nature of property and rights therein. Real estate contracts, deeds, leases, mortgages and other real estate instruments. Testate and intestate transfers of property. A comprehensive course covering all common legal problems involved in real estate ownership and various phases of the real estate business. Excellent in preparing for state licensing examinations.

701 Advanced Business Law (3) Advanced study of legal concepts and the legal environment governing business organizations and professional firms. Includes material concerning governmental regulation, business ethics, professional liability, licensing requirements and fiduciary relationships.

711 Legal and Ethical Environment of Business (3) Today’s managers are expected to make decisions that comply with legal and ethical principles. This course increases awareness of ethical, legal and regulatory controls, problems and responsibilities that impact business dealings with government agencies, consumers, employees, competitors, investors and society. Students will develop the ability to identify and address major legal and ethical issues so as to avoid potential liability and to maintain ethical integrity in a competitive global marketplace.
Chemistry (CHEM)

111 Introduction to Chemistry I: General and Inorganic Chemistry (4) (TBR: CHEM 1010-1011) Fundamental laws of chemistry including topics such as atomic and molecular structure, stoichiometry, chemical bonding, reaction equilibria, acids and bases, kinetics and nuclear chemistry. Experimental techniques in general and inorganic chemistry comprise the lab component. Three hours lecture and one three-hour lab. A student should be registered for or have completed MATH 140 or a higher numbered mathematics course before registering for CHEM 111. CHEM 111 does not fulfill prerequisite requirements for any upper-division chemistry courses.

112 Introduction to Chemistry II: Organic and Biochemistry (4) (TBR: CHEM 1020-1021) Basics of organic and biological chemistry, including topics such as the study of functional groups, amino acids, lipids, carbohydrates, nucleic acids, enzymes and biochemical pathways. Experimental techniques in organic and biochemistry comprise the lab component. Three hours lecture and one three-hour lab. Prereq: CHEM 111, or CHEM 121 and the consent of instructor. A student should have completed MATH 140 or a higher numbered mathematics course before registering for CHEM 112. CHEM 112 does not fulfill prerequisite requirements for any upper-division chemistry courses.

121-122 General Chemistry (4, 4) (TBR: CHEM 1110-1120) This sequence is primarily for students majoring in sciences, math, or engineering. Topics include: 121—atomic theory, atomic structure, chemical nomenclature, stoichiometry, aqueous reactions, gases, thermochemistry, periodic properties, bonding, intermolecular forces and states of matter, properties of solutions; 122—kinetics, equilibrium, acid-base and solubility equilibria, thermodynamics, oxidation-reduction and electrochemistry, nuclear chemistry, molecular geometry and orbital hybridization, introduction to organic chemistry. Three lecture hours and one three-hour lab. Prereq: MATH 140 or a higher numbered mathematics course, or placement in MATH 185 or a higher numbered mathematics course. Prereq: CHEM 121; and Prereq: MATH 140 or a higher numbered mathematics course or Coreq: MATH 160 or a higher numbered mathematics course.

122H Honors General Chemistry II (4) Course is open to students who have demonstrated superior ability in chemistry. See CHEM 122 above for general course description. The Honors course is characterized by an enhanced lab experience in which students will work with a greater degree of independence and will utilize more advanced chemical instrumentation. (Same as CHEM 122 but for Honors credit. May not be taken in addition to CHEM 122.) Prereq: Departmental approval and CHEM 121 with grade of A or B.

310 Chemistry (3) Elements of organic chemistry and biochemistry. Physiological chemistry. Digestion and metabolism. CHEM 310 may not be counted toward either a major or a minor in chemistry and may not be substituted for CHEM 341. Prereq: CHEM 121 and 122.

319 Organic and Biochemistry Laboratory (1) Lab exercises related to topics covered in CHEM 310. Lab includes typical food analyses. CHEM 319L may not be counted toward either a major or a minor in chemistry and may not substitute for the lab portion of CHEM 341. Coreq: CHEM 310.


350 Organic Chemistry of Drugs (3) A study of the organic synthesis of several major drug groups and the ten most highly prescribed drugs. Emphasis is placed on organic chemical reactions and traditionally accepted reaction mechanisms. Some pharmacology and related physiology of these drugs is discussed. Prereq: CHEM 342.
351-352 (551-552) Physical Chemistry (3, 3)  

359 (559) Physical Chemistry Laboratory (2)  
Experiments and computer utilization to study topics listed in CHEM 351 and CHEM 352. Preparation of written technical reports and oral presentation of experimental findings. Two three-hour labs. Prereq: CHEM 320 and credit for, or registration in, CHEM 351 or CHEM 352.

365 Green Chemistry and the Environment (2)  
Green chemistry, the design of chemical products and processes that reduce or eliminate the use and generation of hazardous substances, addresses the need to produce the goods and services that society depends on in a more environmentally benign manner. The emphasis is on atom economy and reduction of chemical resource and energy consumption at the source rather than subsequent pollution remediation. The practice of green chemistry as applied to aspects of analytical, biological, inorganic, organic and polymer chemistry in real-world cases will be investigated. Prereq: CHEM 320 and 341.

390 Internship in Chemistry (1-3) Application of chemical skills and knowledge in a supervised workplace environment. Student may or may not be paid. Evaluation by both supervising instructor and on-the-job supervisor. Prereq: CHEM 320 and 340. Cannot be counted toward upper-division hours required for a chemistry minor.

410 (610) Physical Inorganic Chemistry (3)  
Inorganic chemistry, systematic chemistry of the elements and chemical periodicity considered in the context of modern theories of atomic structure and chemical bonding. Includes written and oral presentations by students of summaries and analyses of contemporary research in and applications of inorganic chemistry. Prereq: CHEM 351.

420 (620) Analytical Methods (4) Advanced theory and practice of analytical chemistry including instrumental approaches to separation and analysis.

Three lecture hours and one three-hour lab. Prereq: CHEM 320 and 351.

430 (630) Spectrometric Methods (3) Modern physical and chemical methods for the isolation and identification of compounds and mixtures. Spectrometric techniques available include IR, NMR and GC/MS. One lecture hour and two labs. Prereq: CHEM 320 and 342.

440 (640) Polymer Chemistry (3) Chemistry of synthetic polymers including mechanisms of polymerization and relations of molecular structure to bulk properties of polymers. Prereq: CHEM 342 and 352.

450 (650) Advanced Physical Chemistry (3) A further study of the application of quantum mechanics to simple systems, studies of molecular spectroscopy and molecular structure including consideration of symmetry and group theory, introduction to statistical mechanics. Prereq: CHEM 352 and MATH 320.

455 (655) Applied Nuclear Chemistry (2)  
Nuclear structure, terminology and reactions. Emphasis on applications including energy from fission and fusion, dosimetry, tracer techniques, gamma spectroscopy, x-ray fluorescence, neutron activation analysis and related topics. One-hour lecture each week at UT Martin with 2-1/2 days of intensive instruction and lab work utilizing facilities of Oak Ridge Associated Universities. A final written report is required. Prereq/Coreq: CHEM 352.

460 (660) Advanced Synthesis (3) Lab course in the application of modern experimental techniques to the synthesis and characterization of organic and inorganic compounds. One lecture hour and two labs. Prereq: CHEM 320 and 342.

480 Special Topics (1-3) The courses will consist of intensive lectures and/or lab work on special topics in chemistry. Course may be repeated with total credits not to exceed three hours. Topics and prerequisites will be announced.

490 Research in Chemistry (3) Research to be directed by a staff member assigned by the department chairman and to be on a subject of interest to the student as well as to staff members. Open only to well qualified juniors and seniors. May not be substituted for any of the specific course requirements of the chemistry major.
700 Directed Studies in Chemistry (3) Survey of chemical principles including their applications to the development of experimental activities for elementary school students.

710 Selected Topics in Chemistry (1-3) Topics to be announced.

Child and Family Studies (CFS)

100 Lifespan Human Development (3) Study of human needs and developmental processes across the lifecycle. Examination of individual and family well-being using a systems perspective. (Same as WMST 100)

211 Child Growth and Development (3) Growth and development of children from birth to adolescence in the context of family life. Includes lab observations.

303 Family Relationships (3) Factors affecting relationships within families throughout the life cycle. Focus on current lifestyles, changing family forms, cultural diversity and theoretical perspectives. (Same as WMST 303)

311 Developmentally Appropriate Activities (3) Planning, implementing and evaluating activities for selected developmental stages in the human life cycle. Emphasis on physical, cognitive, social, emotional and creative activities for young children.

312 Parenting Fathers, Mothers and Children (3) Parent-child relationships. Emphasis on the uniqueness of parent-child relations at different stages of the life cycle, implications for child guidance and current issues related to parenthood. Prereq: CFS 100 or instructor's approval.

313 Child Guidance and Discipline (3) Principles of guidance applicable to family and group situations involving children (all ages into adolescent years, with emphasis on early childhood years). Creating a desirable environment conducive to learning and behavioral development of the child as an individual member of the family and society. Prereq: CFS 100 or instructor's approval.

411 Preschool Laboratory Practicum (4) Student guidance of children in preschool setting under supervision of the program director. Development of teaching techniques, planning, implementation and evaluation of creative group activities. Prereq: CFS 100 or CFS 211.

412 Early Childhood Program Administration (3) Developmentally appropriate administration and management of programs for young children. Prereq: CFS 100 or instructor's approval.

421 Adult Development (3) Development from early through late adulthood, using a human systems perspective. Prereq: CFS 100 and 303 or permission of instructor.

442 (642) Developmental Disabilities in Children (3) Etiological factors affecting young children with developmental delays. Cultural, familial, educational and legal implications. Behavioral characteristics of children observed in early intervention programs. Prereq: Six (6) hours in child development. (Same as SPED 490/690 when title is the same)

443 (643) Community Care and Curriculum Planning for Developmentally Disabled Preschool Children (3) Resources available for community care of children and families, differentiating individual needs, curriculum planning for home and center based intervention, lab experience. Prereq: Six (6) hours in child development. (Same as SPED 490/690 when title is the same)

740 Ecology of Human Development (3) An examination of human development through the life cycle utilizing an ecological approach.

742 Administration of Programs for Children (3) Organization, curriculum development and implementation of standards, assuring quality care of children.

744 Theories in Child and Family Studies (3) Selected theories concerning the development of children and families. Historical views, current research and applications to family life.

751 Resources in Family Life Education (3) Resources useful in developing curriculum content in child and family studies.

753 Assessment in Child and Family Studies (3) Applications of measurement techniques and evaluation methodologies to children and families.
Communications (COMM)

100 Survey of Mass Media (3) A survey of the various fields of mass communications with emphasis on their structure, function, responsibilities, development and impact on society.

200 News Writing (3) The evaluation of news, news gathering methods, discussions and exercises in writing leads, organizing stories, overcoming grammatical and spelling deficiencies, avoiding libel and writing a variety of news stories. Also includes an overview of writing for public relations and broadcast. Structured primarily for communications majors and minors. This course is a prerequisite to all other journalism courses. Prereq: Minimum grade of C in ENGL 111 and ability to type.

210 Introduction to Journalism (3) An examination of the nature of news, criteria for determining news, newsroom organization, interviewing and copy preparation. Instruction and practice in writing news stories, primarily in newspaper style. For non-communications majors only. Prereq: Minimum grade of C in ENGL 111 and ability to type.

220 Voice and Diction (3) Study of the production of vocal tone and the articulation of vowels, consonants and diphthongs, with individual attention to developing an awareness and control of one’s own voice and language habits. Prereq: Communications majors/minors or permission of instructor.

230 Public Speaking (3) Study and application of basic communication theory in the preparation and delivery of extemporaneous informative and persuasive speeches and in critical listening. Prereq: Minimum grade of C in ENGL 111.

230H Honors Public Speaking (3) An introduction to public discourse for students in good standing in Honors Programs. The course will include the intensive study and application of communication theory in the preparation and delivery of extemporaneous informative and persuasive speeches and in critical listening. Limited enrollment. Prereq: Minimum grade of C in ENGL 111 or 111H.

231 Interpersonal Communication (3) Study and practical application of principles of communication in face-to-face human interactions. General communication, self-awareness, perception, conflict, listening and interviewing. (Same as WMST 231)

250 Introduction to Broadcasting (3) Introduction to radio and television fundamentals with lab experience in writing, performance and production for broadcast media. Lecture and lab.

300 News Gathering (3) Practicing lessons learned in COMM 200 News Writing, producing investigative stories, solving problems in ethics and methods of news coverage, covering meetings of various levels of campus and community government and discussing/covers issues and events. Prereq: COMM 200.

305 Copy Editing, Computerized Design and Layout (3) Instruction and practice in editing copy for the media, including content and style, headline writing, picture editing and basic principles of layout. Prereq: COMM 200.

310 History of Mass Media (3) Introduction to the history and development of media from the earliest records of information distribution to the technological opportunities of the 21st century.

315 Writing for Broadcast Media (3) Theory and techniques of writing for radio and TV. Emphasis on news, special events, commercials and promotional material. Prereq: COMM 200 and 250.

320 Writing Features and Editorials (3) Techniques for writing feature articles for newspapers and magazines. Study of freelance markets and submission of students’ articles for publication. Practice in writing editorials and analysis of editorials and editorial pages. Prereq: COMM 200.

322 Desktop Publishing/Presentation Graphics (3) Basic pre-professional, hands-on experience in desktop publishing and computer-generated presentations. Major emphasis is on desktop publishing, including producing fliers, brochures, newsletters and other publications used by public relations practitioners and persons involved in newspaper and magazine production. Graphics, design and layout considerations are stressed. Prereq: Communications majors/minors or permission of instructor.
Communications and the World Wide Web
(3) Study and application of mass communication and media-related topics as related to the World Wide Web and the Internet. Emphasis on Web site design and authoring as mass communication and the use of the Internet by broadcasters, journalists and public relations and marketing communication practitioners.

Principles of Advertising
(3) Examination of advertising principles as they apply to print, broadcast and online media.

Principles of Public Relations
(3) Basic theories and practice in public relations as a communications tool of business, government and nonprofit corporations.

Public Relations Techniques
(3) Examination of skills and techniques used in the practice of public relations, with particular attention given to writing for public relations, copy dissemination, media use and media network design. Techniques range across internal and external media, print, electronic and audiovisual media. Prereq: COMM 326 or permission of instructor.

Public Relations Research
(3) Study of the process of public relations research for planning and evaluating programs of action, including programs of communication. Included: the role of evaluative research methodologies in public relations management. Prereq: COMM 326.

Public Relations Strategy and Implementation
(3) Examination of strategic planning and implementation in public relations administration, with case studies utilized in an effort to place the student in a managerial, decision-making role. Prereq: COMM 326 and 328.

Small Group Communication
(3) Study of systematic group communication with practical application through group participation. Communication theory and its application to small groups, small group theory, special discussion techniques and methods, group problem solving and decision making and parliamentary procedure.

International Public Relations
(3) A study of the dynamics of international public relations, including the infrastructure of international companies and organizations and the management of their global reputations. It also analyzes the barriers involved in global business and processes involved in carrying out crisis and catastrophe communications at an international level. The course provides an opportunity for observation and field study in an international setting through visits to PR firms and organizations in other countries. Prereq: COMM 326 or permission of instructor.

Film Appreciation
(3) A study of the development of the motion picture as a business and an art form from its earliest stages to the present. Particular emphasis on the technical, social and economic factors which have influenced motion picture development. Lecture and lab.

Photojournalism
(3) Introductory and intermediate instruction in black and white photographic techniques, digital darkroom workflow and caption-writing. Also includes an overview of film development and printing. Photographic assignments will give students experience in reporting with a still camera. Lecture and lab. Prereq: COMM 200 or permission of instructor.

Radio Production
(3) Designed to provide advanced study in radio production. Emphasis on production of various types of radio programming, study of radio formats and advanced production techniques. Lecture and lab. Prereq: COMM 250 and 315.

Television Production
(3) An experience-oriented course based on the accepted theory and technique of television production. Emphasis on camera operation, audio, videotape, lighting, artistic design and special effects. Practical experience in entertainment, public affairs and sports programming. Lecture and lab. Prereq: COMM 250 and 315.

Electronic Field Production
(3) A study of and practical experience in the various aspects of small-format videotape and audio recording and editing procedures. Additionally, a survey of the applications of audio and video field production for commercial, corporate and noncommercial broadcast industries. Lecture and lab. Prereq: COMM 315, 350 and 360 or permission of instructor.

Broadcast News
(3) Writing, reporting and producing stories and newscasts for radio and
television. Intensive field and lab work with electronic news gathering (ENG) cameras and editing equipment (both audio and video). Lecture and lab. Prereq: COMM 315, 350, and 360 or permission of instructor.

381 Practicum in Radio (1) A lecture/lab providing supervised experience in radio. May be repeated for a maximum of three hours credit. Prereq: COMM 350 or permission of instructor.

382 Practicum in Television (1) A lecture/lab providing supervised experience in television. May be repeated for a maximum of three hours credit. Prereq: COMM 360 or permission of instructor.

383 Practicum in Journalism (1) A lecture/lab providing practical, supervised experience in editing, editorial writing, feature writing, newswriting, photojournalism, reporting and sports writing. Pass/Fail. May be repeated for a maximum of 3 hours credit. Prereq: COMM 200.

390 Newspaper Organization and Management (3) Study of newspaper advertising obligations, budgets, circulation, cost-cutting, equipment, financial and legal questions, production, promotion, public/internal relations, purchasing and other aspects of newspaper ownership and management. Prereq: Junior standing or instructor’s approval.

399 Special Topics in Communications (3) Intensive treatment of selected topics not found in the regular Communications curriculum. Course content varies from semester to semester. Course may be repeated for credit in different topics. Prereq: Completion of all Communications Department lower-division requirements or consent of instructor.

400 Computer Assisted Reporting (3) In-depth reporting assignments, research and team reporting when appropriate based upon information generated from computer searches using the Internet, Nexus and other search tools. Prereq: COMM 300 or instructor’s permission.

410 Advanced Visual Communication/Multimedia (3) Advanced pre-professional, hands-on experience in Visual Communication. This project-related course will include instruction in the production of print and multimedia products. Students will use computer-authoring applications to prepare advanced publications, infographics and interactive multimedia presentations. Prereq: COMM 250, 322, 323, and 341.

419 Broadcast Programming and Audience Measurement (3) Interpreting quantitative audience research such as Neilsen and Arbitron ratings, syndicated program/analyses and SRDS tables. Students utilize this data to successfully program a fictional broadcast station. Station and Network program strategies, tactics and program development are discussed. Prereq: COMM 250.

420 Broadcast Management and Sales (3) A study of the operation and management of radio and television stations and analysis of station management techniques, departmental organization and personnel practices. An examination of the sales process, the development of presentations and the role played by sales in broadcast stations. Prereq: Junior standing. COMM 350 and COMM 360.

430 Business and Professional Speech (3) Study and practical application of theories of general communication, interpersonal communication and public communication in business and professional settings, with emphasis on presentational speaking. Prereq: COMM 230.

460 Broadcast Producing and Directing (3) Theory and practice related to producing and directing television and radio programming. Emphasis on accepted directing methodology and the producer’s role in developing broadcast and corporate programming. Program development from initial concept through the completed program. Lecture and lab. Prereq: COMM 315, 350, and 360 or permission of instructor.

471 Independent Study (3) In-depth study of advanced communication principles or applied theory chosen by the student and approved by the instructor. Prereq: Senior standing.

475 Internship in Communications (3) Application of broadcasting and/or journalism skills in a supervised assignment with a broadcast, print, public relations, or corporate communications organization. Student may or may not be paid. Prereq: Senior standing and B average in communications.
491 (691) Communication Law and Ethics (3)
Examination of the constitutional underpinnings of freedom of expression and the limitations on such freedoms as enunciated by the U.S. Supreme Court. Students will focus particularly on libel, privacy, intellectual property, source protection, information gathering, obscenity, government regulation and the conflict between a free press and a fair trial. Students will also analyze and apply the ethical standards necessary for media integrity and credibility. **Undergraduate Prereq: Senior standing.**

492 Senior Seminar in Communication Theory (3)
Examination of communication issues, theories, models and world communications systems through research, discussion, writing and speaking. Each student will prepare a senior portfolio. **Prereq: Communications majors only. This capstone course must be taken during senior's final semester.**

**Computer Science (CSCI)**

201 Introduction to Computer Applications (3)
Concepts of computer systems and procedures including software applications, input and output, data storage, communications and networks, Internet and World Wide Web and operating systems and system software. Emphasis on using integrated software tools on the microcomputer which include word processing, spreadsheet, database, presentation graphics, communications, web browsers, electronic mail, personal information management and multimedia authoring. Credit does not apply to computer science minor requirements.

211 Introduction to Computer Programming (3)
Introduction to principles of computer science, information systems and beginning programming techniques in Visual BASIC.net. Includes the use of Visual BASIC for Applications to customize application software such as Microsoft Office.

221 Programming Concepts and Problem Solving I (3)
Computer history, problem solving algorithms, control structures, representation of data. Introductory programming in the C++ language. Intended for computer science majors.

222 Programming Concepts and Problem Solving II (3)
A programming intensive continuation of CSCI 221 For computer science majors.

Non-computer science majors may be admitted with departmental approval. May be used as one of the programming language requirements for a minor in computer science. **Prereq: Grade of C or better in CSCI 221.**

226 Intermediate Programming in a Second Language (3)
Detailed study of programming in a language other than that studied in CSCI 221. Emphasis placed on competent programming in the selected language, understanding the language's main application areas, history, basis for creation, advantages and disadvantages. May be repeated one time for a total of six (6) hours credit with a different programming language. **Prereq: CSCI 221.**

250 COBOL Programming (3)
Introduction to Common Business Oriented Language using structured methodology. Problem solving directed toward business applications. **Prereq: CSCI 211 or 201 or 221.**

260 RPG Programming (2)
Report Program Generator with applications and programs oriented to commercial fields. **Prereq: CSCI 201 or 211 or 221.**

290 Topics in Computer Science [Topic title] (1-3)
Lectures and/or special projects related to specialized topics in computer science. Course may be repeated for a maximum of six (6) hours credit. May be offered on a pass/fail basis. **Prereq: Departmental approval required.**

301 Foundations of Computer Science I (3)
Course introduces the discrete foundations of computer science, providing the appropriate theoretical background for advanced courses. Topics include: functions, relations, sets, logic, proof techniques, combinatorics, Boolean algebra and digital logic. **Prereq: CSCI 221 and either MATH 185 or placement in MATH 251, or permission of instructor.**

302 Foundations of Computer Science II (3)
A continuation of CSCI 301. Topics include: graph theory, finite state machines, trees, automata, sequences, series, recurrence relations and context free grammars. **Prereq: CSCI 301 or permission of instructor.**

320 Assembler Language and Computer System Organization (3)
Structure of digital computers, introduction to machine language, number
representations, symbolic coding and assembler language, register sets, instruction types, addressing modes, input-output subroutines, segmentation, paging and introduction to operating systems. Prereq: CSCI 222.

325 Data Structures (3) Detailed study of data structures and their implementations. Strings, lists, queues, stacks, graphs, trees, B-trees, AVL trees, sparse arrays. File structures, recursion, sorting, searching, hashing. Prereq: CSCI 222.

335 Object-Oriented Programming (3) Advanced programming using an object-oriented language, classes, packages, software reusability, data abstraction and data hiding, inheritance, polymorphism, exception handling, graphics objects, graphical user interfaces and multimedia. Prereq: CSCI 222.

340 (540) Numerical Analysis (3) Formulation of numerical problems for solution on a digital computer. Error analysis and control, nonlinear equations, differentiation, integration, systems of equations, differential equations, curve fitting and eigenvalue problems. Prereq: CSCI 221 and MATH 252; CSCI 301 or MATH 310. (Same as MATH 340/540)

350 Advanced COBOL (3) Business programming applications using advanced features of COBOL with emphasis on programming style, techniques, and structured programming. Prereq: CSCI 250.

351 Object-Oriented System Analysis and Design (3) Study of the systems development life cycle system, various types of systems including business and government. Methods of designing systems, data management, input and output design, hardware selection and methods of information processing. Prereq: CSCI 221 or 250.

352 Object-Oriented Systems Development (3) Practical applications involving an in-depth study of technical issues and design methodologies used in the design of decision support systems. Prereq: CSCI 351.

360 Introduction to Computer Networks (3) Fundamentals of microcomputer connectivity and communications. Local and wide area network basics, networking architecture and standards. Network protocols including TCP/IP. Comparison, installation and maintenance of Network Operating System. Prereq: CSCI 222.

380 Artificial Intelligence (3) Introduction to artificial intelligence, pattern recognition and classification, fuzzy set logic, natural language user interfaces, learning machines and adaptive systems, object oriented programming inference and rule based systems, arity, expert systems, associative systems, forward and backward chaining backtracking depth first and breadth first searching. Programming in languages appropriate to A.I. Prereq: CSCI 222 and 301.

385 Parallel Computing (3) Introduction to Fundamentals of Parallelism, Parallel computation models which include parallel algorithms and parallel architectures, performance and scalability of parallel systems, parallel algorithms and programming for well known numerical problems. Prereq: CSCI 222 or 226.


420 (620) Computer Organization and Architecture (3) A study of the organization of modern computer systems, memory organization and management features, virtual memory systems interrupt service, multiprogramming, hardware and software equivalency, RISC and large instruction set machines, logic emulation, variable architectures, multilevel machines, stack and pipeline architectures. Concurrency in computation. The organization of microcomputers, medium and large computer systems. Special architectures. Prereq: CSCI 320 and 325.

458 Decision Support and Expert Systems

470 (670) Organization of Programming Languages (3) Syntax and basic characteristics of grammars, Backus-Naur form, language constructs, dynamic and static storage allocation, binding time, interpreted versus compiled languages, lexical analysis, parsing, special purpose languages. Prereq: CSCI 320.

475 Compilers, Interpreters and Language Translators (3) Theory of compilable languages, construction of software for compiling, interpreting and translating computer languages. Study of various types of translators, implementation of a translator for a language. Prereq: CSCI 320 and 325.

480 Internship in Computer Science (1-6) Supervised work experience in business establishments, institutions, or other organizations matched to the student’s curriculum. May be repeated for up to a total of six (6) hours internship credit. A maximum of three (3) hours may be used to fulfill upper-division computer science electives. Prereq: Departmental approval is required; at least Junior standing.

485 (685) Computer Operating Systems (3) A study of operating systems, processing of I/O and interrupt service, buffering, spooling and memory management services, security and error protection, systems accounting and resource allocation, multi-programming and multi-processing, inter-process communication, includes the study and use of several operating systems. Prereq: CSCI 320 and 325.

490 (690) Advanced Topics in Computer Science [Topic title] (1-3) Lectures and/or special projects related to specialized advanced topics in computer science. Course may be repeated for a maximum of six (6) hours credit. May be offered on a pass/fail basis. Prereq: Departmental approval required.

495 Senior Seminar Selected Topics: [Title] (1) Computer science and information systems, hardware, software. Professional opportunities and issues, employment trends. Students are required to write summary reports and give oral presentations. Graded on a pass/fail basis. Prereq: Senior standing computer science majors.

Consumer Resource Management (CRMG)


205 Cultural Etiquette (3) Protocols and strategies integrating modern lifestyles with the proprieties of social and business conduct, interactions within multicultural and international settings. For non-departmental majors only.

210 Leadership Roles in Resident Settings (3) Assessment of leadership styles and skills applicable to resident settings. Development of personal competencies essential for leadership roles among persons in resident groups.

302 Personal and Family Finance (3) Financial planning for attaining individual and family goals. Individual and household management of resources and private measures to reduce economic risks. Federal tax system, investments and estate planning.

403 (603) Housing and Home Equipment (3) Analysis of home equipment needs, selection, use and care. Evaluation of recent developments. Space planning to maximize effective use of equipment. Two one-hour lectures and one two-hour lab.

413 (613) Resource Management for Special Groups (3) Allocations and adaptations of personal and family resources for special groups: physically and mentally handicapped, aged, low-income, single heads of household and social re-entries from institutions. Prereq: Six hours of courses in family and consumer sciences or instructor's approval.

711 Consumption and Standards of Living (3) Economic and welfare aspects of consumption. Analysis of factors associated with changes in the standard of living. Review of major consumption studies. Prereq: CRMG 202 or consent of instructor.
712 Housing Programs and Policies (3) Analysis of private and public programs and policies designed to promote realization of suitable homes and living environments for households. Economic and social problems related to national housing objectives.

713 Environmental Design (3) Examination of major research and theory development. Application to user needs in residential, commercial and social institutional settings. Prereq: INTD 303 or consent of instructor.

722 Management and Family Resources (3) Examination of current trends and research. Focus on effects of change in family resources on structures and heads of households.

723 Consumer Economics (3) Consumer functions in the economy; structure of consumer markets; government action relating to consumer; factors affecting prices of consumer goods. Prereq: CRMG 202 and 302 or consent of instructor.

Criminal Justice (CJ)

200 Introduction to Criminal Justice (3) An intensive examination of the philosophical and historical backgrounds, agencies and processes, purposes and functions, administration and technical problems and career orientations of our criminal justice system. Extensive reading required. Critical thinking, problem solving and writing exercises are utilized. This course is a prerequisite to all other criminal justice courses.

220 Criminal Justice Ethics (3) An examination of the ethical issues encountered within the Criminal Justice System. Critical moral reasoning, criteria for ethical decision making, codes of professional ethics and typical ethical dilemmas in the Criminal Justice System will be covered.

300 Principles of Law Enforcement (3) An introduction to the complex responsibilities, procedures and policies of a law enforcement agency operating in a pluralistic, multi-culture, free market, democratic society. Extensive reading required. Critical thinking, problem solving and writing exercises geared to practical applications in law enforcement are core requirements of this course. Interaction with computer based software applications for research required. Prereq: CJ 200 and 220 with a minimum grade of C in both.

310 (510) Principles of Criminal Investigation (3) An intensive examination of the foundation and principles of criminal investigation. This course examines the appropriate use of various sources of information, problem areas encountered when conducting criminal investigations within contemporary society and the follow-through activities necessary for capitalizing on investigative efforts. Extensive reading and writing required.

315 (515) Research and The Writing Process (3) an overview of research and writing issues for the student who is engaged in social science or educational research. The course is designed to develop students’ abilities to conduct scholarly research and report the findings of that research within both academic and professional settings.

320 (520) Criminal Procedure (3) An overview of the process of adjudication of a criminal case from the time of arrest to final disposition, including trial procedures, the due process requirement and constitutional limitations. Research requirement. Prereq: CJ 200 and 220 with minimum grade of C in both.

325 (525) Criminology (3) Problems, theory, cause, control and prevention of criminal behavior. Prereq: SOC 201 (Same as SOC 413/613)

330 Serial Killers (3) This course will provide students a detailed introduction to, and examination of, serial murder, specifically focusing on biological, psychological and social theoretical explanations of psychopathic, sociopathic, anti-social personality disorders. Students will actively participate in the understanding of issues surrounding serial murder presented to law enforcement agencies and the public. This class is not designed to assist in the development of skills necessary for the forensic criminal profiling of offenders. Research papers and oral presentations are components of this course.

360 Child Abuse (3) The goal of this course is to introduce students to the multifaceted issue of child abuse law. Students will learn about child sexual predators, child witnesses, types of child abuse and neglect and the future of child abuse in the criminal justice system. The course will include an examination of the various courts that deal with child abuse issues.

364 (564) Corrections (3) Provides an overview of the history and various perspectives of incarceration, tracing the development of prisons in America from their earlier roots in Europe. An examination is placed upon prison inmates, correctional staff, correctional treatment and punishment philosophies, political perspectives regarding criminal offenders and special interest offenders such as juveniles and females, as well as capital punishment. (Same as SOC 364/564)

370 Juvenile Justice: Social Problems and Legal Issues for Social Work, and Criminal Justice (3) Focuses on the juvenile, the family and the community as related to and interwoven with legal issues, practices and processes encountered by the social work and criminal justice professionals and their clients. (Same as SWRK 345)

380 Probation and Parole (3) Provides an in-depth examination of the field of community-based correctional supervision, which includes many options utilized by correctional agencies to supervise clients in the community. Emphasis is placed on adult and juvenile systems, major U.S. Supreme Court decisions, methods of supervision and how this component interfaces with incarceration.

400 (600) Criminal Law (3) The history, purpose and theory of criminal law. An examination of the classification of crimes and the nature of criminal liability. Prereq: CJ 200 and 220 with minimum grade of C in both.

410 Victimology (3) This course addresses the issues of crime in society by focusing on the victim. An examination of the expanding role of the victim in the criminal justice system will be the main focus of this course. Students will develop an understanding of criminal prosecutions, of the cost and extent of victimization and will examine various types of offenses committed against victims (child maltreatment, assault, homicide, domestic violence). Extensive research and writing projects are major components of this course.

411 (611) Special Topics (1-3) Selected topics of current interest and importance. Course may be repeated with different topics. A maximum of six credit hours can be counted toward a major or a minor in Criminal Justice. Prereq: Instructor's approval.

413 Family Law (3) This course provides an intensive examination of the rules governing family law including but not limited to: marriage, divorce, child custody, child abuse and neglect and adoption. Upon conclusion of this course, the successful student should be able to: 1) describe what constitutes a family; 2) describe the requirements for marriage; 3) identify the grounds for divorce; 4) identify the various aspects of obtaining custody of children; 5) think critically about the multifaceted issues of child abuse and/or neglect and 6) describe the adoption process.

415 American Death Penalty (3) This course will provide an in-depth examination of the issues related to capital punishment in America. Students in this class will examine the death penalty component of the American Criminal Justice System through liberal, conservative and critical approaches that provide opportunities to investigate and question various crime control strategies utilized in the United States. A component of this class will be the development of skills necessary to critically assess the impact the use of capital punishment has on society. Extensive reading and writing assignments required.

420 (620) Criminal Evidence (3) An overview of criminal evidence within the United States, furnishing a practical insight into the rules of evidence and considerations regarding the admissibility of evidence in court. Emphasis is placed on court
decisions and contemporary issues within the field and their effect upon members of society. Extensive research required.

450 (650) Current Issues in Criminal Justice (3) Emphasizes the professional development of criminal justice students by a critical examination of ethics, topical commentaries, articles and reports from the most recent literature in the criminal justice field. Extensive reading and writing are core requirements. A research project involving a review of current literature and/or original research is required. Interaction with computer based software applications is essential. Prereq: CJ 200 and 220 with minimum grade of C in both.

455 Travel Study in Criminal Justice [Selected Topics] (1-6) This course has been designed to provide students with educational travel either domestically or internationally focusing on specific criminal justice agencies and topics under the guidance of university instructors/professors. Specific course requirements, topics, locations and prerequisites will be announced in advance. May be taught as either a group study tour or as an independent study abroad program. Students may repeat course with different topics.

460 (660) Senior Seminar in Criminal Justice (3) A critical examination of theory and practice in the Criminal Justice System. Research, writing and presentation of papers. Prereq: Senior standing and completion of all of the Criminal Justice major requirement courses with a grade of C or above.

470 (670) Tennessee Criminal Law (3) In-depth study of the current Tennessee Code Annotated sections on substantive Criminal Law and applicable sections of evidence and procedure. Prereq: CJ 400 or permission of instructor.

480 Internship in Criminal Justice (3-12) Application of criminal justice skills in a supervised workplace setting. Placement will be determined by the instructor, in consultation with the student. The student may or may not be paid. Student grades will be based on the instructor's academic evaluation as well as the work evaluation by the student's on-the-job supervisor. Prereq: Criminal Justice major, Senior standing, and a minimum 3.00 GPA in Criminal Justice coursework or permission of department chair. May only be taken once for credit.

485 Directed Studies in Criminal Justice (3) Research to be directed by a member of the Criminal Justice faculty assigned by the department chair and to be on a subject of interest to the student as well as faculty members. Prereq: Junior or Senior standing with instructor approval.

Dance (DANC)

110 Understanding Dance (3) General survey of the development of dance as an art form from primitive times to the present.

110H Honors Understanding Dance (3) General survey of the development of dance as an art form from primitive times to the present. For students in good standing in Honors Programs.

120 Contemporary Dance I (2) Analytical and practical study of beginning dance techniques. May be repeated for credit.

130 Ballet I (2) Introduction to the basic techniques of ballet. May be repeated for credit.

150 Dance Ensemble (2) Preparation and public performance of selected works of dance repertory. May be repeated for credit. Prereq: Instructor's approval.

210 Music and Movement (2) Basic rhythmic analysis for dance. Understanding the relationship between music and movement for both instruction and performance. Introduction to digital music editing and composition for dance.

215 Movement for Performers (2) Provides the actor/musician/dancer with a basic awareness of the human body and function for the stage by exploring various movement techniques.


310 Jazz Dance (2) Analytical and practical study in jazz dance techniques. May be repeated for credit. Prereq: DANC 120 or 320.
320 Contemporary Dance II (2) A continuing study of dance vocabulary with emphasis on analysis and discipline. May be repeated for credit. Prereq: DANC 120.

330 Ballet II (2) Continuation of training in technical skills of classical ballet. May be repeated for credit.

350 Dance Ensemble (2) Preparation and public performance of selected works of dance repertory. May be repeated for credit. Prereq: Instructor's approval.

401 Special Projects in Dance (2) Directed individual study. May be repeated for credit.

415 Dance History and Contemporary Issues (3) This course is an inquiry into varied issues that are central to how dances are created, performed, viewed, received, criticized and analyzed in a historical context. Prereq: DANC 110 or instructor's approval.

420 Advanced Contemporary Dance (2) A continuing study of dance vocabulary with emphasis on intensive advanced level of contemporary dance technique.

440 (640) Choreography II (2) Advanced techniques of dance composition. Prereq: DANC 240 and instructor's approval.

460 Senior Project (1) Performance or research based projects representative of the student’s interest, talents and cumulative experience in dance. Projects are selected and prepared under the supervision of a dance faculty member. Mandatory Pass/Fail.

Dance Education (DNED)

211 Introduction to Teaching Dance (2) A comprehensive view of dance teaching as a profession including requirements, challenges and opportunities. The stages of children’s development in dance will be covered, as well as lesson plan writing. Includes eight (8) clock hours of clinical lab experiences, directed observations and limited participation in classroom settings.

390 (590) Dance Pedagogy (3) Concepts, methods, materials and practice in teaching dance appropriate for both elementary and secondary students. Includes 12 clock hours of clinical lab experiences, directed observations and limited participation in classroom settings.

400 Senior Seminar in Dance Education (3) Current issues in the profession of dance education, review of national standards and the relationship of aesthetic education to the overall development of young people. Historical, philosophical and social aspects of dance in the curriculum. Measurement and evaluation of dance instruction. Includes 10 clock hours of clinical lab experiences, directed observations and limited participation in classroom settings. The senior project in dance for the dance education emphasis will be a component of this course. Prereq: DNED 390.

471 Student Teaching in Dance Grades K-6 (6) Supervised student teaching of dance in grades K-6 in off-campus centers for a minimum of 7.5 weeks. Must be taken concurrently with DNED 473. (Normally taken concurrently also with DNED 471.) Prereq: TCED 301-302 and all other required courses in the Professional Education core.

472 Student Teaching in Dance Grades 7-12 (6) Supervised student teaching of dance in grades 7-12 in off-campus centers for a minimum of 7.5 weeks. Must be taken concurrently with DNED 473. (Normally taken concurrently also with DNED 471.) Prereq: TCED 301-302 and all other required courses in the Professional Education core.

473 Seminar in Teaching Dance (1) Structured seminar for advanced discussion of instructional and classroom management, variety of methodology, discipline, school law, professionalism and related topics. Emphasis will be placed on oral expression and written communication. Coreq: DNED 471-472 (student teaching courses)

Driver Safety Education (DSED)

420 (620) General Safety Education (3) A background in characteristics of effective teaching and techniques for safety principles, practices and procedures. The cause and prevention of accidents in the home, school and community as related to modern living.
430 (630) Basic Driver and Traffic Safety Education (3) The course will explore driver education in the secondary school, paying particular attention to traffic laws and enforcement, traffic engineering and educational theory. Lesson planning and peer teaching will be evaluated.

435 (635) Advanced Driver and Traffic Safety Education (3) The course will explore advanced driver education concepts of various driving activities involving instructional aids germane to Drivers Education in the public schools (i.e. simulators, range equipment). Prereq: DSED 430 or 630.

Early Childhood Education (ECED)

Note: For student teaching courses (402-412), students should check their program of study sheet and student teaching application for other student teaching prerequisites specific to their major.

341 Mathematics/Science in Early Childhood Education (4) Exploration and examination of the content and concepts of the early childhood mathematics and science curriculum. It investigates a study of methods and materials and a review of relevant research. It includes unit planning, lesson planning, simulated teaching and small group instruction in the public schools. Prereq: Admission to Teacher Education and TCED 302.

351 Language Arts/Social Studies in Early Childhood Education (4) Exploration and examination of the content and concepts of the early childhood language arts and social sciences curriculum. It investigates a study of methods and materials and a review of relevant research. It also includes unit planning, lesson planning, simulated teaching and small group instruction in the public schools. Prereq: Admission to Teacher Education and TCED 302.

409 Student Teaching in Kindergarten (6) Supervised student teaching in kindergarten for a minimum of 7.5 weeks. Must be taken with TCED 401 and TCED 403 or TCED 412. Prereq: Admission to Teacher Education, TCED 301-302-303, specialized teaching strategies courses, TCED 475, 480, 485 and Reading requirements. See note above.

411 Student Teaching in Pre-Kindergarten (6) Supervised student teaching in Pre-Kindergarten for a minimum of 7.5 weeks. Must be taken with TCED 412. Prereq: Admission to Teacher Education and completion of all specialty area and professional education requirements. See note above.

412 Student Teaching Grades 1-3 (6) Supervised student teaching in grades 1-3 for a minimum of 7.5 weeks. Must be taken with TCED 409 or 411. Prereq: Admission to Teacher Education and completion of all specialty area and professional education requirements. See note above.

460 (660) Learning: Birth Through Age Eight Years (3) Exploration and knowledge of the learning process in the context of parent-child, teacher-student and school-family-child relationships are the emphases of this course. Cultural diversity and implications of diversity for children birth through age eight years and their learning are addressed. Developmentally appropriate curriculum, instructional material, environments for learning and community resource utilization are integral components of the course. There are 15 clock hours of clinical lab experiences, directed observations and limited participation in educational settings. Prereq: Admission to Teacher Education and TCED 302 or permission of instructor.

475 (675) Learning and the Kindergarten Child (4) A four-hour credit course in a state-approved kindergarten placement. It includes a weekly one hour seminar with a faculty member. Prereq: for 475—Admission to Teacher Education and TCED 302; TCED 340 or TCED 350 (K-6 majors); ECED 341 or ECED 351 (PreK-3 majors) or permission of instructor; for 675—Admission to Teacher Education. (Same as TCED 475/675.)

480 (680) Emergent Literacy in the Content Areas: Language Arts, Social Studies, Math, Science and Health (4) A four-hour methods course addressing the content areas of language arts, social studies, math, science and health for the young child with thematic and interdisciplinary teaching strategies appropriate for children in Pre-kindergarten through Grade Three. Prereq: Admission to Teacher Education and TCED 302 or permission of instructor.
481 (681) Emergent Literacy (3) Exploration and examination of appropriate resources and strategies for emergent readers from ages 0-8. Methods for encouraging emergent reading skills are investigated. Criteria for book selection, creative links for enhancing literature, techniques in storytelling and literacy data are included. Prereq: Admission to Teacher Education and TCED 302 or permission of instructor.

485 (685) Creativity and Play (4) A four-hour methods course addressing creativity and play in Pre-kindergarten through Grade Three (birth to age eight years). Prereq: Admission to Teacher Education and TCED 302 or permission of instructor.

490 Learning Theory and Affective Environment (3) An analysis of the psychological foundations of learning and the application of learning theory to classroom practice, including cognitive, affective and behavioral approaches to classroom discipline and self-discipline. Prereq: Admission to Teacher Education.

Economics (ECON)

100 American Enterprise System (3) An introductory elective course designed to acquaint students with the various aspects of the U.S. economy, including the free enterprise system, economic issues of public concern, government functions and policies in a market economy and the importance of the evolving global economy.

201 Principles of Macroeconomics (3) An introduction to the economic problem, the basics of supply and demand, national income accounting, fiscal and monetary policy and other topics. Coreq: A college level math course.

202 Principles of Microeconomics (3) An in-depth analysis of supply and demand, the economics of production and cost and analysis of firm behavior in various market models, resource markets and the international economy and other topics. Coreq: A college level math course.

311 Intermediate Microeconomic Theory (3) An in-depth analysis of supply and demand and their elasticities, the allocation of resources and price determination in various market models, an analysis of consumption and marginal utility and other topics. Prereq: ECON 201-202.

312 Macroeconomic Theory (3) A thorough analysis of aggregate demand, output, the level of employment, the price level, national income accounting and economic growth. Comparison of classical, Keynesian and other approaches to the employment problem. Prereq: ECON 201-202.

321 International Economics (3) An introduction to basic theories of international trade. World trade and economic growth, world trade and income distribution, basic rationale for free trade and trade protection, national policies affecting international trade, trade agreements, international cartels, international trade accounts and foreign exchange. Prereq: ECON 201 and 202.


331 Money and Banking (3) Nature and functions of money, role of commercial banks in the monetary and economic system, structure and function of the Federal Reserve System, monetary operations of the treasury, relationship between money and economic activity. Prereq: ECON 201 and 202.

333 International Business (3) The domestic and international dimensions of the relationships among private enterprises, governments and individuals in a changing world. Exploration of the role of governments in maintaining environments conducive to private enterprise including multinational businesses as well as the danger of business concentration both domestic and international. Prereq: ECON 201 and 202.


351 Business Forecasting (3) Study of the factors contributing to business fluctuations. A survey
of the possible techniques used to analyze current conditions and to forecast future levels of activity as well as applications of selected forecasting models. Prereq: ECON 201 and 202.

411 Managerial Economics (3) Application of economic theory to business decision making: emphasis on profit objectives, measurement and forecasting demands and costs. Prereq: ECON 201 and 202.

416 Development of Economic Thought (3) An analysis of the origin and development of economic thought beginning with the traditional and premarket economies and continuing through mercantilism, capitalism, socialism and the mixed economies of the twentieth century. Prereq: ECON 201 and 202.

417 Market Structures (3) An analysis of monopoly and competition in market economies and the interrelationships of market structure, business behavior and economic performance. Prereq: ECON 201, 202 and 311.

471-479 Topics in Economics (3) Selected topics in economics offered on an occasional basis for qualified students. Admission by permission of instructor only.

480 Internships in Economics (1-9) Supervised work experience in business establishments, institutions, or other organizations matched to the student's curriculum. May be repeated for up to a total of nine hours internship credit. A maximum of six hours may be used to fulfill degree requirements. Pass/Fail. Prereq: Departmental approval required; at least Junior standing.

491-492 Independent Study in Economics (3, 3) Special research projects undertaken individually under the supervision of the faculty. Maximum credit available for independent study courses is six hours. Prereq: Senior standing.

710 Managerial Economics (3-4) Applications of economic theory, management problems from an economic point of view using decision-making tools in managing enterprises.

711 Economics for Secondary Teachers (1-3) Presentation and analytical application of economic concepts with emphasis on methods of relating the concepts to students in grades 9-12. May be repeated for a maximum of three semester hours. May not be counted toward M.B.A. or M.Ac. degree requirements.

712 Economics for Elementary Teachers (1-3) Presentation and analytical application of economic concepts with emphasis on methods of relating the concepts to students in grades K-8. May be repeated for credit for a maximum of three semester hours. May not be counted toward M.B.A. or M.Ac. degree requirements.

713 Selected Topics in Economics (1-6) The study of specific topics in economics. Topics and prerequisites to be announced. May be repeated for a maximum of six semester hours. May not be counted toward M.B.A. or M.Ac. degree requirements.

720 International Business and Economics (3) The function, purpose and role of business in an international economics context. Included are multi-national firms, international monetary system, balance of payments, government regulations affecting international trade, foreign exchange markets.

Educational Administration and Supervision (EDAS)

710 Introduction to Supervising and Leading Educational Change (3) Processes, organization and functional context of educational administration. Emphasis on the responsibilities of the principal, supervisor and superintendent.

720 Leadership Theories in the Educational Setting (3) An explanation of postindustrial leadership models as they relate to administration of educational organization. Definitions of leadership, power, authority, commitment, ethics, empowerment style, substance, leaders, managers and other dimensions of leader/follower relationships.
Public Relations and Resource Allocation in the School Setting (3) The course explores and develops models for developing appropriate positive public/community involvement in the allocation of resources. Topics of study include: planning and budgeting, public relations, bond issues, management of school affairs, personnel issues and management and all support service components (transportation, food services, record keeping, payroll, purchasing, auditing and school/community partnerships).

Educational Finance (3) Fiscal setting of the public schools; state-federal participation; special emphasis on financial aspects of public education in Tennessee.

Facility Management for a Safe, Efficient and Effective Learning Environment (3) A study of the relationship between educational facilities and educational programs. A safe and nurturing environment is essential for maximum learning outcomes. This course explores and develops facility management models to maximize effective utilization.

Law and Policy in the Educational Setting (3) A study of law, policies and governance issues as related to public education; further, a study of the dynamics of policy development and advocacy under our democratic system which includes the principles of representation governance that undergird the system of American public schools.

Essential Skills for School Leaders (3) Explores the development and improvement of skills essential to successful educational leadership. Topics include leadership influence, interpersonal influence, written communication, decision-making, planning, assessment and school safety. Students cannot receive credit for both EDAS 765 (1-3) and EDAS 765 (3).

Internship in School Leadership (3) The student completes approved administrative assignments under the mentorship of a practicing organizational leader in a selected school system.

Field Studies in EDAS: Secondary Principal (3) The student completes approved administrative assignments with selected school systems.

Field Studies in EDAS: Secondary Supervisor (3) The student completes approved administrative assignments with selected school systems.

Field Studies in EDAS: Superintendent (3) The student completes approved administrative assignments with selected school systems.

Field Studies in EDAS: Selected Educational Setting (3) The student completes approved administrative assignments with selected school systems.

The Principalship (3) The role of the principal, problems in administering a school program.

The Supervisor (3) The role of the supervisor as a curriculum worker. Models of supervisory technique.

School Transportation (3) Administration of transportation in the public school system.

School Personnel (3) Emphasis upon such problems as recruitment, selection, promotion, morale, salary and staff relation.

Educational Evaluation (EDEV)

Educational Tests and Measurement (3) Construction, use and interpretation of teacher-made and standardized instruments for measuring pupil development. Emphasis on the determination of different estimates of reliability and validity and an introduction to questionnaire and test construction. Prereq: Admission to Teacher Education.

Educational Statistics (3) An elementary course in methods applied to educational problems; resolution of assigned or chosen problems in educational statistics.
Educational Foundations
(EDFN)

700 Educational Studies: Historical and Philosophical Dimensions (3) An integrated analysis and synthesis of how historical and philosophical ideas, policies and practices impinge on the nature of educational discourse and decision making, with particular attention to relating historical-philosophical dialogue to current educational topics and controversies.

710 Research in Education (3) Introduction to graduate study. Consideration of the various techniques appropriate to the production and consumption of educational research.

720 Educational Studies: Multicultural Issues in Education and Counseling (3) Emphasis is on multicultural education and cultural foundations in education and counseling; developing knowledge, self-awareness and skill competencies for effectiveness in teaching and counseling services in Pre K-12 schools.

730 Seminar in Post-Secondary Education (3) Models of instruction applicable to the college level; major problems and issues in higher education.

731 Internship in College Teaching (3) Assignment as an intern in a selected area of college teaching. Prereq: EDFN 730 and consent of instructor.

Educational Psychology and Guidance (EDPG)

712 Learning and Instruction (3) Overview of research related to the major theories of learning with emphasis on classical and operant conditioning, social learning theory and cognitive theories applied to school environments. Required for students in school counseling or advanced education degrees who are not licensed teachers.

715 Advanced Educational Psychology (3) An in-depth research based survey of recent developments in educational psychology, with particular emphasis upon problems associated with learning.

716 Growth and Development Across the Life Span (Birth to Adult) (3) Emphasis on theory and research on social, emotional and cognitive development over the life with emphasis on educational settings.

720 Introduction to Counseling (3) An orientation to counseling, guidance skills and principles including sociological, historical and philosophical foundations of pupil personnel services; informing students and parents of the purposes of the guidance program, confidentiality, ethics in the counseling relationship and the profession, gender and multicultural issues in counseling and contemporary trends or issues in counseling.

722 Professional, Ethical and Legal Issues in Counseling (3) An introduction and orientation to the practice of counseling in schools, community agencies and higher education settings. Topics addressed will include the history and philosophy of counseling; ethical decision-making; professional credentials and affiliations; and, standards of practice, research and educational preparation in counseling.

725 Theories and Techniques of Counseling (3) This course provides a detailed review of the theoretical foundations of major counseling theories and techniques applicable to children/adolescents/adults. Reviewed theories will include Psychoanalytic, Neo-Freudian, Person-Centered, Gestalt Therapy, Existentialist, Behaviorist, Rational Emotive Therapy and Reality Therapy.

730 Career Development and Counseling (3) Theories of vocational development, career education, career development and the significance of the world of work in the lifestyle of individuals. The strategies related to career exploration, career-related assessment, application of career development materials, technical and college career tracks of curriculum development, exploration of gender and cultural/ethnicity issue that may affect the career development of individuals in our society are emphasized.
740 Group Dynamics (3) A study of group processes, techniques and ethical issues involved in using groups for counseling and personal and interpersonal growth opportunities. A participatory format will be utilized in exploring the versatility of groups. Topics of course investigation include the study of leadership, communication skills, stress management and career development.

745 Current Issues in Counseling (Topic) (3) A study of selected problems and issues affecting counselors. May be repeated under different topics. Only six credits may be applied to the M.S.Ed. degree in Counseling. Prereq: Instructor’s permission.

750 Mental Health and Psychopathology (3) This course reviews concepts of personality development and factors influencing it, as well as psychopathology as described in the Diagnostic and Statistical Manual of Psychiatric Disorders.

760 Individual Appraisal (3) A study of representative psychological and educational test/inventories including the rationale which underlies testing or assessment of individuals for educational or guidance purposes. Practice in the use and appraisal of instruments and techniques for understanding the individual, including both testing and non-testing interview or developmental history procedures.

775 Counseling Children/Adolescents with Psychological Dysfunctions (3) Identification of children and adolescents with extensive emotional, social, or psychological/mental disorders. Emphasizes a broad spectrum of therapeutic approaches to treatment that can be utilized in educational and mental health settings and in counseling/consultative activities; IEPs; parent education and training; teacher education and training; social skills education and training; and self esteem education and training.

777 Psychopathology: Diagnosis and Treatment (3) This course reviews interviewing and diagnosing skills and intervention models and techniques applicable to psychological disorders: cognitive, affective and behavioral.

780 Community Resources (3) A study of the development and function of community agencies and resources. Employment services, rehabilitation services, mental health centers, public health services and social welfare agencies are included.

781 Introduction to Marital and Family Counseling (3) An exploration of the basic philosophy, goals and techniques associated with the major theories of marital and family counseling.

782 Alcohol and Substance Abuse Counseling (3) The process of counseling alcohol and drug or substance dependent persons. The modalities of treatment including the pharmacological approach and referral are covered.

783 Community Counseling (3) A survey of the organization, management and delivery of community counseling services. Overview of relationships between counselors and other professionals in a variety of practice settings; techniques of community needs assessment and program evaluation; overview of methods used in community settings; characteristics of community service programs.

785 Counseling Laboratory (3) Supervised, clinical on-campus experience in beginning counseling skills. Relationship building skills, listening skills, fact finding skills, reflective skills, summarizing skills, role playing, simulation and actual experiences with clients in counseling are investigated. Professional liability insurance is required. Enrollment is by application and permission of the instructor.

786 Organization and Administration of School Counseling Services/Programs (3) Emphasis on the counselors’ need to have a knowledge base on the functions, organization, administrative principles and evaluation of counseling services in Pre K-12 schools, college and junior colleges, community agencies and counseling or mental health centers. The student will prepare a proposal/project for the organization and administration of a counseling program that is specific to his/her career goals. Students will be involved in designing a counseling program for a specific school setting that is congruent with their career objectives. Project also includes preparation of sample lesson plans to be incorporated into classroom counseling units.
788 Internship in Community Counseling I
(3) This internship provides opportunity to develop skills in counseling on site. Case experiences are discussed under the supervision of faculty in class meetings. Students complete a minimum of 300 hours on site that includes 120 client contact hours (group and individual) and 15 hours of supervision. Favorable final evaluations by the site supervisor and faculty are required for credit. Prereq: EDPG 785. Application needed, limited enrollment.

789 Internship in Secondary School Counseling
(3) Includes 300 hours of supervised experience in 7-12 school settings. Students will plan and manage all facets of the counseling program including counseling with students, coordinating the program and consulting with student support personnel, parents and community resources. Prereq: EDPG 712, 720, 725, 740, 750, 760, 775, 785, 786, and consent of course instructor and on-site supervisor.

790 Internship in Elementary School Counseling
(3) Includes 300 hours of supervised experience in Pre K-6 school settings. Students will plan and manage all facets of the counseling program including counseling with students, coordinating the program and consulting with student support personnel, parents and community resources. Prereq: EDPG 712, 720, 725, 740, 750, 760, 775, 785, 786 and consent of course instructor and on-site supervisor.

791 Supervised Practicum in Secondary Counseling
(3) For students seeking secondary school counselor certification. Prereq: EDPG 710, 715, 720, 727, and consent of faculty adviser.

792 Internship in Community Counseling II
(3) This internship provides the opportunity to develop skills in counseling on site. Case experiences are discussed under the supervision of faculty in class meetings. Students complete a minimum of 300 hours on site that includes 120 client contact hours (group and individual) and 15 hours of supervision. Favorable final evaluations by the site supervisor and faculty are required for credit. Prereq: EDPG 788 and permission of instructor. Application needed– limited enrollment.

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**Educational Studies (EDST)**

290 Workshop in Education [Title of Workshop] (1-3) Workshop on selected topics. No more than nine hours of workshop credit may be applied to an undergraduate degree in education. Can not be repeated for credit under the same workshop title.

440 (640) Selected Problems in Education: [Title] (3) A study of selected problems and issues affecting education. Prereq: Admission to Teacher Education or Instructor's approval.

450 (650) The School, the Teacher, and the Law (3) A study of the federal, state and local laws that affect the operation of the school with special emphasis on legal rights and responsibilities of both students and school personnel.

460 (660) Education in a Pluralistic Society (3) The study of issues that exist in teaching culturally different students in a multicultural school setting.

710 Models of Instruction, Curriculum Development and Advanced Teaching Strategies (3) Advanced principles of curriculum and instruction as applied to education; study of a variety of curriculum designs used regularly or experimentally; development and organization of the curriculum; analysis of current practices, problems and trends in education; an exploration of significant alternative approaches to teaching in education.

740 Project in Education (3) The student will select a specific project and develop this project through research and implementation in a specified educational setting. Prereq: 18 graduate hours and permission of instructor. May not be repeated for credit without permission of the Department of Educational Studies.
750 Advanced Computer Applications and Technologies in Education (3) Intended to give background in microcomputer technology necessary to enable the teacher to be computer functional in the classroom use of software, word processing, use of databases and spreadsheets, low and high resolution graphics, as well as administrative software applications. In addition, there will be a review of up-to-date technologies used in education. A research paper regarding computer applications in the student’s field of study will be required. 

**Prereq:** HLNV 311, the equivalent, or demonstrated proficiency.

**Elementary Education (ELED)**

413 (613) Mental Health in Schools (3) Influences within the school which affect the self-concepts, motivation and social adjustment of students and teachers. Emphasis on means for promoting mental health in the classroom. Opportunity for self-exploration provided.

422 (622) The Microcomputer and Its Use in the Classroom (3) Provision of the understanding and skills necessary to make the computer an effective tool in the classroom. Focus on the use of the computer in the various subject (grade level) areas. Attention to computer ethics. (Same as SEDU 422/622)

423 (623) Logo for the Public School Teacher (3) Focus on the educational, philosophical and psychological development of the Logo environment in a public school setting. Emphasis on the project approach. 

**Prereq:** Admission to Teacher Education

(Same as SEDU 423/623)

430 (630) Problems in Teaching Language Arts and Social Studies in the Elementary School (3) Individual or group work on assigned or chosen problems in English and social studies.

**Prereq:** Admission to Teacher Education.

433 (633) Contemporary Approaches to Teaching Arithmetic and Science in the Elementary School (3) Special investigation concerning effective teaching of arithmetic and science in the elementary school. Use of the current curricula materials. Individual or group work on assigned or chosen problems in elementary arithmetic and science.

455 (655) Child Psychology (3) An overview of the principles of learning and behavior applicable to young children’s physical, social and intellectual development. Emphasis on the current research findings related to young children and the process of education. 

**Prereq:** Admission to Teacher Education.

490 (690) Workshop in Education: [Title of Workshop] (1-3) Workshop on selected topics. Same as SEDU 420 (620) if same Title of Workshop. No more than six hours of workshop credit may be applied to an undergraduate or graduate degree in education. 

**Prereq:** Instructor’s approval.

730 Methods of Teaching Language Arts, Mathematics, Social Studies and Science in the Elementary Classroom (3) Exploration and examination of the content and concepts of the elementary language arts, mathematics, social studies and science curricula as well as an investigation of methods and materials and a review of relevant research. Unit planning, lesson planning, simulated teaching and small group instruction in the public schools are required. 

**Prereq:** TCED 780 and Admission to Teacher Education.

760 Supervision of Student Teaching and Field Experiences (3) A study of objectives and general techniques of supervising student teachers and students participating in field experiences in public schools.

790 Seminar: [Selected Topics] (3) Can be taken in multiples of three semester hours. Twelve semester hours can be counted toward a degree. 

**Prereq:** Permission of instructor. Certain workshops may be offered on a pass/fail basis.

792 Master Research Project, K-8 (2) The culminating professional research project for the Master of Science in Education with a major in Teaching Program. Seminar topics to include but not limited to educational reform, curriculum design, student achievement, parent involvement, cultural diversity, education technology, assessments and educators as collaborative leaders and mentors (in a K-8 setting). 

**Prereq:** ELED 791. May repeat enrollment. P/N only.
793 Student Teaching Grades K-4  (3) Supervised student teaching in grades K-4 for a minimum of 7.5 weeks. Must be taken with ELED 794.

794 Student Teaching Grades 5-8  (3) Supervised student teaching in grades 5-8 for a minimum of 7.5 weeks. Must be taken with ELED 793.

795 Student Teaching Grades K-6  (5) Supervised student teaching in grades K-6 for a minimum of 7.5 weeks. To be taken by candidates seeking licensure in K-12 programs.

Engineering (ENGR)

100 Society and Technology  (3) Historical review of the interaction between society, technology and engineering.

101 Engineering Graphics  (3) Introduction to technical drawing and introduction to the computer for use in computer assisted drawings. Two lecture hours and one two-hour lab. Coreq: MATH 251 or instructor's approval.

111 Engineering Methods I  (2) Problem solving and engineering design. Introduction to technical drawing. Use of the computer for word processing, e-mail, Internet, engineering calculations, graphical presentations and data analysis. Professional ethics. Two two-hour labs. Coreq: MATH 185 or above.


121 Statics  (3) Application of vector algebra to represent forces and moments in two and three dimensions and the relationship of these forces systems to the equilibrium of rigid bodies. Centroids and moments of inertia. Three lecture hours. Prereq: MATH 251.

201 Engineering Methods  (2) Problem solving in a computer environment. Standard software tools emphasizing matrix methods are used to solve engineering problems. One hour lecture, one three-hour lab. Prereq: MATH 185 or 251.

210 Engineering Design  (2) Teams conduct a design project that includes development of requirements and objectives, project planning, information research, concept development and assessment, detailed design, preparation of assembly and part drawings, technical report writing and a technical presentation. Ethics, safety and team building are included. Project requires use of 3D CAD technology. One hour lecture and one three-hour lab. Prereq: ENGR 112 and MATH 251 or instructor's approval.

220 Strength of Materials  (3) Concepts of stress and strain; stress-strain relations; transformations of stress and strain; applications including axially loaded members, torsion of circular shafts, bending of beams, buckling of columns, stress in spherical and cylindrical thin-walled pressure vessels. Shear and moment diagrams, combined stress. Three lecture hours. Prereq: MATH 252 and ENGR 121.


232 Linear Circuits I  (3) Basic principles of resistors, operational amplifiers, capacitors, inductors and transformers. DC and AC circuit analysis techniques (Ohm’s law, Kirchhoff’s laws, mesh analysis, nodal analysis and circuit theorems). Steady-state AC phasor analysis, including power and power factor. Students cannot receive credit for both ENGR 230 and ENGR 232. Three lecture hours. Prereq: MATH 252. Coreq: PHYS 221.

233 Electrical Laboratory I  (1) Lab methods, experiments and design approaches that illustrate and apply digital logic and linear circuit topics covered in ENGR 231 and ENGR 232. One three-hour lab. Prereq: ENGR 231. Coreq: ENGR 232.

241 Dynamics  (3) The relationship between the motion of particles and rigid bodies and the forces which act upon them. Newton’s laws of motion. Three lecture hours. Prereq: MATH 252, PHYS 220 and ENGR 121.
301 Computer Aided Engineering/Design Tools (1) Discipline specific software tools are used to model engineering problems. Students apply software targeted to their engineering concentration. One three-hour lab. Prereq: Junior standing and instructor's approval.

310 Engineering Materials (3) Correlation of atomic structure, crystal structure and microstructure of solids with mechanical, physical and chemical properties of engineering significance. Two lecture hours and one three-hour lab. Prereq: CHEM 121 and ENGR 220.

311 Engineering Applications of Probability and Statistics (3) Basic knowledge of probability theory and statistical inference for use in engineering. Theory and practical applications of random variables and probability distributions; estimation of statistical parameters; hypothesis testing; and regression analysis. Three lecture hours. Coreq: MATH 320.

313 Industrial Internship (1) Work experience during one summer or semester for a business, industry or government agency, on-site, in an engineering intern (apprenticeship) position which is approved by the department chair. A final report is required. Students who complete the co-op program will be allowed to substitute their last co-op semester for this course. Students enrolled in this course will be considered full-time by the College of Engineering and Natural Sciences. Prereq: At least Junior standing and approval of the Department Chair.

315 Engineering Analysis (3) Formulation and solution of differential equations typical to engineering. Emphasis will be placed on classical solution techniques of ordinary differential equations and Laplace transforms. Three lecture hours. Prereq: MATH 252.

316 Signals and Systems (3) Classification of signals and systems, convolution representation of systems, response of linear systems to periodic and finite-energy signals, system modeling by differential equations, Fourier series and transforms, frequency domain analysis of systems. Three lecture hours. Prereq: ENGR 232 and 315 or MATH 330.

317 Instrumentation and Experimental Methods (3) Introduction to experimental methods, design of experiments and analysis and interpretation of experimental data. Topics include accuracy and precision, Fourier series and FFT, expected time response of zeroth-order, first-order and second-order measurement systems, applied statistics and uncertainty analysis, analog and digital signals and AD/DA conversion and introduction to basic transducers and instruments for measuring voltage, current, temperature, pressure, flow and strain. Two lecture hours and one three-hour lab. Prereq: ENGR 232. Coreq: ENGR 311 and 315.

331 Semiconductor Electronics (3) Basic electronic device concepts including diodes, field transistors, bipolar junction transistors; design and analysis of diode switching and rectifier circuits; single and multistage transistor amplifiers biasing; frequency response, output stage and power amplifiers; operational amplifier applications; electronic simulation using software. Three lecture hours. Prereq: ENGR 231, 232, and 233.

332 Linear Circuits II (3) Transient analysis, two-port networks, AC power analysis, three-phase circuits, magnetically coupled circuits, frequency response and active filters, Laplace and Fourier transform analysis of circuits. Three lecture hours. Prereq: ENGR 232 and 233.

333 Electrical Laboratory II (1) Lab methods, experiments and design approaches that illustrate and apply semiconductor electronics and linear circuit topics covered in ENGR 331 and ENGR 332. One three-hour lab. Prereq: ENGR 331. Coreq: ENGR 332.


341 Fluid Mechanics (3) Fluid properties and behavior, fluid statics and dynamics of ideal and

350 Principles of Land Surveying and Geomatics (3) Engineering surveying measurements, methods and computations. Mensuration, leveling, traversing, topographic mapping. Construction surveys. Two lecture hours and one three-hour lab. Prereq: AGET 220 or instructor's approval. Coreq: MATH 160 or 251.


352 Transportation Engineering (3) Analysis of the characteristics of transportation systems, including vehicle dynamics, volumes, speeds, capacities, roadway conditions and accidents. Highway design including intersections, horizontal and vertical alignment, earthwork and pavement design. Three lecture hours. Prereq: MATH 252. Coreq: ENGR 311.

353 Hydraulics and Hydrology (3) Fundamentals of open channel hydraulics and engineering hydrology. Hydrologic cycle, qualitative and quantitative hydrology and related practical engineering computations involving precipitation, runoff and discharge. Engineering analysis of practical open channel flows; energy, depth, slope and transient considerations. Coreq: ENGR 341.


371 Advanced Strength of Materials (3) Development and application of the equations of equilibrium, strain-displacement equations, stress-strain relationships and ductile and brittle failure theories to plane stress, plane strain and axisymmetric problems. Solution of problems involving thick walled cylinders, interference fits, rotation disks, torsion of non-circular cross sections, contact and stress concentrations. Three lecture hours. Prereq: ENGR 220


381 Human Factors in Engineering (3) A study of the limitations of humans in production and other man-made systems. Analysis of stress and environmental factors such as noise, lighting and atmospheric conditions on performance of tasks. Three lecture hours. Prereq: Instructor's approval.

409 Project Management (2) An introduction to the methods and tools used to manage projects. Topics include the role and responsibilities of a project manager, planning, estimating, scheduling, tracking and monitoring, resolving conflicts and documentation of project status and deliverables. Prereq: ENGR 210, ENGR 313, and senior standing.
410 Senior Design I (1) Working as individuals or in teams, students conduct an engineering design project while working under the direction of a faculty adviser. Students are required to organize and develop a plan for accomplishing project activities; establish goals, objectives and design requirements; gather information; develop concepts; perform trade studies, analyses and engineering assessments; and develop engineering design packages that may include system diagrams, schematics, CAD models and assembly and part drawings. A summary presentation to faculty, students and industry representatives is required. Prereq: Senior standing and approval of the student’s adviser.

411 Senior Design II (3) A continuation of ENGR 410. Working as individuals or in teams, students complete the design project defined in ENGR 410. This capstone design project requires that students apply knowledge gained in previous coursework to solve practical, open-ended engineering problems encountered on a realistic project having deadlines and performance requirements. Some projects may require hardware fabrication and product realization. A final report, poster and presentation to faculty, students and industry representatives are required. Prereq: ENGR 410.

413 Engineering Management (3) Human, quality, organizational, legal and ethical aspects of the engineering profession. Three lecture hours. Prereq: Instructor's approval.

430 Transformers and Rotating Machines (3) Introduction to magnetic circuits. Ideal and practical transformers. Efficiency and regulation. Three-phase transformers. DC motors and generators. Single and polyphase motors, generators and alternators. Applications of large and small motors and generators. Two lecture hours and one three-hour lab. Prereq: ENGR 232.


450 Reinforced Concrete Design (4) Reinforced concrete as a modern construction material. Aggregate and Portland cement properties and mix design. Structural analysis and design of beams, deep beams, columns and shear walls using ACI code. Quality assurance, quality control. Standard lab tests and design project with test verification. Three lecture hours and one three-hour lab. Prereq: ENGR 351.


452 Steel Design (3) Structural analysis and design of beams, columns, axial members, frames and connections. Use of load and resistance factor design (LRFD) code. Design of typical steel structure including connections. Use of computer analysis. Three lecture hours. Prereq: ENGR 351.


460 Microprocessors and Computer Organization (4) Computer organization, assembly language programming, memory hierarchy, digital interfacing, use of microprocessors in common consumer applications, study of contemporary general and special purpose architectures. Three lecture hours and one three-hour lab. Prereq: ENGR 231, and CSCI 221 or 231.

461 Communication Systems (3) Analog and digital communication systems, information coding, modulation, signal processing techniques, software and hardware implementations, contemporary
wireless, audio and video applications. Three lecture hours. Prereq: ENGR 231, 311, and 316.

462 Linear Control Systems Design (3) An interdisciplinary approach to feedback control system analysis and design. Block diagrams, transfer functions, stability, steady state error, time response, root locus and Bode techniques, lead/lag compensators and design of PID controllers. Three lecture hours. Prereq: ENGR 232, 241, and 315.

463 Electrical Power Systems (3) Transmission line parameters and models, power flow studies, fault analysis. Electrical power control methods including voltage regulation, generator allocation and protection schemes. Three lecture hours. Prereq: ENGR 315 and 332.

464 Engineering Electromagnetics (3) Application of physical laws of electricity and magnetism to the design of electrical components, including resistors, capacitors, inductors, antennas and transmission lines. Transient and steady-state behavior of electromagnetic waves. Three lecture hours. Prereq: ENGR 332, PHYS 221, and MATH 320.


472 Kinematics/Dynamics of Machines (4) Analysis and synthesis of mechanisms and machine systems subjected to dynamic forces and motion constraints. Topics covered include classical analysis and synthesis of mechanisms, computer modeling and simulation of machine dynamics, rotating unbalance and analysis and synthesis of cams and geared systems. Three lecture hours and a three-hour lab. Prereq: ENGR 241, 315, and MATH 320.

473 Machine Design (3) Fundamental principles, including stress analysis and design considerations for static and fatigue strength. Design and selection criteria for mechanical components including fasteners, weldments, springs, bearings, gears, clutches, brakes and miscellaneous elements used in mechanical systems. Three lecture hours Prereq: ENGR 371 and 472.

474 Manufacturing Processes (3) An introduction to the processes used in manufacturing to convert raw materials into finished products. Processes covered include casting, molding, forming and shaping, material removal and joining. The mechanical and metallurgical fundamentals of material deformation processes will also be covered. Two lecture hours and one three-hour lab. Prereq: ENGR 220 and 310.

475 Automated Production Systems (3) A study of production automation and related systems including CAD/CAM, numerical control, industrial robotics, flexible manufacturing systems and programmable logic controllers. Two lecture hours and one three-hour lab. Prereq: Junior standing.


490 Special Topics (Title of topic) (1-3) Selected topics relating the state-of-the-art in engineering science and engineering design. Engineering subjects which are of current interest and importance but are not covered in depth in any other course. May be repeated for credit. Prereq: Approval of advisory committee and dean.

Engineering, Civil (CIEG)

354 Advanced Land Surveying and Geomatics (3) Principles of the Global Positioning Systems (GPS), mapping surveys, mapping, astronomical observations, control surveys and geodetic reductions, state plane coordinates, boundary surveys, surveys of public lands, construction surveys, horizontal curves, vertical curves, volumes, photogrammetry and an overview of geographic information systems. Two lecture hours and three-hour lab. Prereq: ENGR 350. (Same as AGET 354)
454 Land Surveying with GPS
(3) Land surveying techniques and methodologies using survey-grade Global Positioning Systems (GPS). Topics include: the GPS signal, biases and solutions, GPS receivers and GPS surveying methods (static, differential GPS [DGPS], kinematic, pseudokinematic, rapid static, on-the-fly and real-time kinematic [RTK]), coordinates, planning a GPS-based survey, observing (equipment, reconnaissance, monumentation, logistics) and postprocessing. Techniques for proper utilization of RTK and DGPS. Two lecture hours and two-hour lab. Prereq: CIEG 354 or AGET 354. (Same as AGET 454)

456 Boundary Control and Legal Principles
(3) Role of the surveyor in boundary establishment, creating GLO boundaries, creating nonsectionalized boundaries, locating easements and reversion, resurveying and retracing sectionalized lands, locating sequential conveyances, locating simultaneously created boundaries and locating combination descriptions and conveyances. Fundamentals associated with the ownership, transfer and description of real property; federal and state nonsectionalized land surveys; and riparian and littoral boundaries. Surveyor ethics, liability and professionalism. Two lecture hours and two-hour lab. Prereq: CIEG 354 or AGET 354. (Same as AGET 456)

458 Subdivision Site Planning and Development
(3) Physical elements of designing land subdivision including: sustainability and site design, site analysis, site grading (soil properties, slope stability, erosion and sediment control), designing for people, street and parking lot design, infrastructure (cul-de-sac design, parking lot design, streets, etc.), landscape restoration (wetlands, streams, vegetative cover, erosion damage, brownfield redevelopment, etc.), site layout, vegetation in the site plan, project management issues, historic landscapes and preserving the land and landscape and culture. Two lecture hours and two-hour lab. Prereq: CIEG 354 or AGET 354. (Same as AGET 458)

Engineering, Industrial (INEG)

310 Operations Management
(3) Management of business transformation processes. A survey of the basic concepts, principles and practices involved in the design, implementation, operation and control of business processes (operations) in contemporary business organizations. Emphasis is placed on the integration of the operation function with other disciplines to foster achievement of strategic and tactical goals in both manufacturing and service organizations. Topical coverage includes operations strategy, product/service design, process design, contemporary quality management, forecasting, capacity planning, facility location and layout, work design and scheduling, production planning and control with a broad emphasis on goal-driven process and productivity management and quality management. Prereq: MATH 210 and MGT 301, or ENGR 210. (Same as MGT 310)

312 Introduction to Management Science
(3) Introduction to quantitative methods used in business decision making. Topical coverage includes mathematical programming, dynamic and network programming, multi-objective decision modeling, decision theory, simulation, inventory models and waiting lines. Computer software will be used to analyze application problems in business and economics. Prereq: CSCI 201 and MGT 310, or INEG 310. (Same as MGT 312)

330 Process Control and Improvement
(3) A methodology for selecting, defining, measuring, stabilizing, evaluating and improving both production and service processes is presented. A variety of analytical methods are utilized in the sequence of instruction including the seven simple tools of quality, metrology, SPC, process capability analysis and experimental design. Prereq: Junior standing. (Same as MGT 330)

402 Industrial Safety
(3) Accident prevention, control and record keeping, safety standards, codes and laws. Fundamentals of industrial hygiene, occupational safety and health. Organization and development of safety programs. Prereq: Junior standing or instructor’s approval.

412 Applied Operations Management
(3) Design, operation, control and continuous improvement of lean operations processes through methods analysis utilizing TOC, JIT and TQM principles. Emphasis is on the design, implementation and
operation of integrated lean processes covering such functions as aggregate planning, master scheduling, inventory planning and control, material requirements planning, production scheduling and control, capacity requirements planning and production and process layout and work design and flow. A project is required. **Prereq:** MGT 310 or INEG 310. (Same as MGT 412)

**English (ENGL)**

**100 English Studies: Critical Thinking and Writing** (4) Provides intensive practice in the college-level treatment of texts. Predominantly a skills course that requires students to think critically, to respond in writing to a variety of readings and to generate, revise and edit texts of their own. Three classroom hours and one hour of lab. ENGL 100 must precede and may not be substituted for ENGL 110. In order to advance to ENGL 110, students must complete ENGL 100 with a grade of C or higher.

**110 English Composition: Critical Thinking and Writing** (4) Continued work with the fundamentals of written discourse. Study of rhetoric, grammar and style as a means to effective prose. Readings and concomitant writing assignments. Predominantly a skills course. Three classroom hours and one hour of lab. **Prereq:** successful completion of ENGL 100. In order to proceed to ENGL 112, students must complete ENGL 110 with a grade of C or higher.

**111 English Composition** (3) (TBR: ENGL 1010) Introduction to the fundamentals of written discourse. Study of rhetoric, grammar and style as means to effective prose. Readings and concomitant writing assignments. Predominantly a skills course. Students must complete ENGL 111 and 112 in sequence. In order to proceed to ENGL 112, students must complete ENGL 111 with a grade of C or higher.

**112 English Composition** (3) (TBR: ENGL 1020) Further study of written English and practice in composition. Readings and research writing with documentation. Predominantly a skills course. Students must complete ENGL 111 and 112 in sequence. For successful completion of ENGL 112, students must earn a grade of C or higher.

**111H-112H Honors English Composition** (3, 3) An introduction to written discourse for students with Enhanced ACT scores in English of 28 or above.

**200 Introduction to Literary Style** (1) Principles of and practice in literary analysis. **Prereq:** ENGL 111-112.

**250 British Literary Tradition** (3) (TBR: ENGL 2210) English literature from Beowulf through the Neoclassic period. **Prereq:** ENGL 111-112.

**250H Honors British Literary Tradition** (3) The literature of Britain from its beginnings through the eighteenth century. Limited class size allowing in-depth discussions, projects and presentations. Open to students who have demonstrated superior academic quality. **Prereq:** ENGL 111-112 and departmental approval.

**251 British Literary Tradition** (3) (TBR: ENGL 2220) English literature from the Romantic period to the present. ENGL 251 may be taken before ENGL 250. **Prereq:** ENGL 111-112.

**251H Honors British Literary Tradition** (3) The literature of Britain from the romantic period to the present. ENGL 251H may be taken before ENGL 250H. Limited class size allowing in-depth discussions, projects and presentations. Open to students who have demonstrated superior academic quality. **Prereq:** ENGL 111-112 and departmental approval.

**260 American Literary Tradition** (3) (TBR: ENGL 2110) American literature from the pre-Colonial period through the Romantic period. **Prereq:** ENGL 111-112.

**260H Honors American Literary Tradition** (3) American literature from the pre-Colonial period through the Romantic period. Limited class size allowing in-depth discussions, projects and presentations. Open to students who have demonstrated superior academic quality. **Prereq:** ENGL 111-112 and departmental approval.

**261 American Literary Tradition** (3) (TBR: ENGL 2120) American literature from the Realistic period to the present. ENGL 261 may be taken before ENGL 260. **Prereq:** ENGL 111-112.
261H Honors American Literary Tradition (3) American literature from the Realistic period to the present. ENGL 261H may be taken before ENGL 260H. Limited class size allowing in-depth discussions, projects and presentations. Open to students who have demonstrated superior academic quality. Prereq: ENGL 111-112 and departmental approval.

270 World Literature (3) (TBR: ENGL 2310) A survey of world masterpieces (excluding American and British writers) from the beginnings through the Renaissance. Prereq: ENGL 261H.

271 World Literature (3) (TBR: ENGL 2320) A survey of world masterpieces (excluding American and British writers) from the eighteenth century to the present. ENGL 271 may be taken before ENGL 270. Prereq: ENGL 111-112.

305 (505) Advanced Composition (3) Principles of and practice in the various modes of expository writing. Prereq: ENGL 111-112.


320 (520) Introduction to English Linguistics (3) A linguistic study of the sound system, word structure and syntax of English. Some attention to etymology and social and regional dialects.

325 (525) Technical Communications (3) Introduction to written, oral and electronic media in professional fields such as criminal justice, engineering, agriculture and business. Topics include memos, letters, proposals, feasibility reports, oral presentations and on-line communications. Prereq: ENGL 111-112 and one course within the student's major field of study.

330 (530) Topics in World Literature (3) A study of selected authors, genres or periods from world literature (Eastern and Western) in translation. Specific topics may include Greek and Roman Drama, Medieval European literature, the modern European novel, Russian literature and Japanese literature. Students may repeat course with variation in topic.

341 (541) Topics in American Literature before 1900 (3) A study of selected authors, movements and periods in American literature before 1900. Specific offerings may include Colonial American literature, American Renaissance, American Realism and Naturalism, nineteenth-century American Poetry, or nineteenth-century Women Writers. Students may repeat course with variation in topic.

343 (543) Literatures of Contemporary America (3) A study of literature representative of the many cultural groups in America, with emphasis on aspects of race, ethnicity, religious background and gender since 1945.

345 (545) Black Writers in America (3) Prose, poetry and drama by black authors.

350 (550) Women Writers: Gender, Race and Class (3) A historical survey of women writers, including contemporary writers, which focuses on women writers' concern with and presentation of issues such as race, ethnicity, religion and class. (Same as WMST 351)

355 (555) Folklore (3) A survey of folk literature and its significance as an aid to understanding racial and cultural heritage.

360 (560) Sixteenth-Century British Literature (3) A study of British literature written between 1485 and 1603 excluding Shakespeare.

365 (565) Restoration and Eighteenth-Century English Literature (3) A study of English literature from 1660 to 1798.

370 (570) Romantic Prose and Poetry (3) A study of English literature from 1798 to 1832.

375 (575) Development of English Drama (3) A survey of English drama from the Medieval beginnings to Shaw and Wilde.

380 (580) Modern Drama (3) Major British, American and Continental playwrights since Ibsen.


390 (590) Playwriting (3) Writing exercises, scenes and one-act plays which may be performed in the lab theater. Prereq: ENGL 111-112 and THEA 110 and 220 or by permission of the instructor. (Same as THEA 390/590.)
### Course Descriptions

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Credits</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>395 (595)</td>
<td>Literature and Film</td>
<td>(3)</td>
<td>A study of the interrelationships among literary genres, scenarios and the film form. Assignments include reading the literature as well as viewing films.</td>
</tr>
<tr>
<td>401 (601)</td>
<td>Studies in British and Commonwealth Writers Since 1660</td>
<td>(3)</td>
<td>An intensive study of one to four authors from England, Scotland, Ireland, or the Commonwealth (Canada, New Zealand, Australia, India and South Africa) writing after 1660.</td>
</tr>
<tr>
<td>420 (620)</td>
<td>History of the English Language</td>
<td>(3)</td>
<td>The development of English from its Indo-European backgrounds to the present day. Elementary readings in Old and Middle English illustrating various stages of the language.</td>
</tr>
<tr>
<td>425 (625)</td>
<td>Advanced Grammar</td>
<td>(3)</td>
<td>Study of system and pattern implicit in the English language. Basic sentence patterns, inflections, determiners, parts of speech, expansions, complementation and usage.</td>
</tr>
<tr>
<td>440 (640)</td>
<td>Southern Literature</td>
<td>(3)</td>
<td>A study of humorists, local colorists and realists in relation to the Southern tradition in literature from William Byrd to the present.</td>
</tr>
<tr>
<td>445 (645)</td>
<td>The American Novel to Faulkner</td>
<td>(3)</td>
<td>Representative novels from the beginnings to Faulkner, with attention to the historical development of the genre.</td>
</tr>
<tr>
<td>450 (650)</td>
<td>Introduction to Literary Criticism</td>
<td>(3)</td>
<td>The concepts, terminology and procedures of formal literary study with readings in representative critics.</td>
</tr>
<tr>
<td>460 (660)</td>
<td>Early English Literature</td>
<td>(3)</td>
<td>A survey of Old and Middle English literature in translation (excluding Chaucer) from the beginnings to 1485.</td>
</tr>
<tr>
<td>465 (665)</td>
<td>Victorian Prose and Poetry</td>
<td>(3)</td>
<td>A study of English literature from 1832 to 1901.</td>
</tr>
<tr>
<td>470 (670)</td>
<td>The British Novel to Joyce</td>
<td>(3)</td>
<td>Representative novels to Joyce, with attention to the historical development of the genre in Great Britain.</td>
</tr>
<tr>
<td>475 (675)</td>
<td>Modern Novel</td>
<td>(3)</td>
<td>Major twentieth-century novelists and movements, primarily in Great Britain and America.</td>
</tr>
<tr>
<td>480 (680)</td>
<td>Chaucer</td>
<td>(3)</td>
<td>A study of representative works read in Middle English, with attention to the cultural context.</td>
</tr>
<tr>
<td>485 (685)</td>
<td>Shakespeare</td>
<td>(3)</td>
<td>A study of representative poems and plays, with attention to the cultural background and to the theater of Shakespeare's age.</td>
</tr>
<tr>
<td>490 (690)</td>
<td>Seventeenth-Century British Literature</td>
<td>(3)</td>
<td>A study of the British literature written between 1603 and 1660 including Milton's entire career.</td>
</tr>
<tr>
<td>494</td>
<td>Internship in English</td>
<td>(3)</td>
<td>To gain experience in the use of written and oral communications in the world of work. Service positions are not monetarily compensated. Course performance based on an agreement between student and English department chair, who stipulates specific academic and work assignments. In all cases, grades will be based upon academic evaluation and work evaluation by on-the-job supervisors. May be repeated once with permission of the English Department Chair.</td>
</tr>
<tr>
<td>495 (695)</td>
<td>Topics [title TBA] in Gender and Cultural Studies</td>
<td>(3)</td>
<td>Special topics in gender and cultural studies issues in literature. May be repeated with variation in topic. (Same as WMST 496 when topic offered is on women’s literature and issues.)</td>
</tr>
<tr>
<td>496 (696)</td>
<td>Seminar [title TBA] in Language or Literature</td>
<td>(3)</td>
<td>Special topics in literature or linguistics. May be repeated with variation in topic.</td>
</tr>
<tr>
<td>499</td>
<td>Critical Approaches to Literature: A Senior Capstone Course</td>
<td>(3)</td>
<td>A capstone experience for English and Secondary English majors to read, write, review, evaluate, put the major’s academic career in perspective and have a better grasp of the nature of the discipline. A writing and speaking intensive course.</td>
</tr>
<tr>
<td>700-701</td>
<td>Graduate Studies in Language or Literature</td>
<td>(3, 3)</td>
<td>Advanced study in literature or linguistics. Open to graduate students in Education. May be repeated for credit.</td>
</tr>
</tbody>
</table>
Exercise Science (EXSC)

305 Applied Kinesiology (3) Introduction to the study of human movement. Includes anatomical terminology, joint movement, analysis and application of basic biomechanical principles emphasizing safe instructional and performance practices. Prereq: any human anatomy and/or physiology course with a lab or instructor's approval.

316-317 Exercise Science Practicum (2, 2) An introduction to a variety of career opportunities, developing a professional resumé, professional philosophy, professional goals and objectives and a professional portfolio. Includes a 45 hour supervised study and experience with a cooperating agency. Application must be approved and liability insurance purchased before student may enroll. Prereq: Student must be a Department of Health and Human Performance major.

318 Exercise Science and Wellness Directed Practicum (2) A 45 hour supervised study and experience with an appropriate on-campus department/personnel.

319 Exercise Science and Wellness Practicum (2) An introduction to a variety of career opportunities, developing a professional resumé, professional philosophy, professional goals and objectives and a professional portfolio. The practicum includes a 45 hour supervised study and experience with a cooperating agency. Application must be approved one semester in advance.

429 (629) Applications in Exercise Physiology (1) Application of exercise physiology knowledge and skills as it relates to health and fitness of all ages in the general population. Coreq: EXSC 430 for Exercise Science/Wellness and Athletic Training student ONLY. May be repeated and/or taken alone with instructor's permission.

430 (630) Exercise Physiology (3) The study of acute and chronic effects of exercise on physiologic functions. Major topics include energy transfer, metabolism, body composition, muscle contraction and cardiorespiratory function. Prereq: Any human anatomy and/or physiology with lab.


433 Exercise Testing and Prescription: Special Populations (3) Application of exercise testing and prescription in an array of patient/client populations including those with heart and/or pulmonary disease, diabetes, pregnancy and/or older adults. Develop proficiency in using testing equipment and evaluating results. Prereq: EXSC 431.

710 Advanced Exercise Physiology (3) Comprehensive examination of theoretical principles and their practical application to the fields of sport, health/fitness and rehabilitation. Major issues and up-to-date research findings in training, testing and clinical applications will be discussed.

Family and Consumer Sciences (FCS)

100 Family and Consumer Sciences Perspectives (1) Family and consumer sciences as an academic discipline. Survey of the curriculum, its interdisciplinary nature, overview of professional opportunities and formulation of individual plans for education and career. Concepts and principles of decision making and resource management applied to family and consumer sciences. Required of all family and consumer sciences majors. Offered in fall semester only.

400 Senior Seminar (3) Assessment of personal and academic potentials for professional careers by the Family and Consumer Sciences graduate. Examination of crucial past, present, and future issues that affect individuals, families, communities and job environments using systems theory. Analysis of these issues through teambuilding activities and assignments with focus on interrelationships of issues and capacity building. This is a speaking and writing intensive course. Prereq: Senior standing.

411 Fundamentals of Cooperative Extension (3) History, philosophy and organizational structure of the Cooperative Extension Service, major areas
of program emphasis, teaching methods used and relationships with other educational agencies. (Same as AGRI 411)

460 Orientation to Field Experience (2)
Intensive course emphasizing preparation for individualized field experience in area of career choice. Scheduled concurrently with Family and Consumer Sciences 48- and Family and Consumer Sciences 49-Supervised Field Experience (1-5, 1-5) Prereq: Senior standing and minimum of 2.50 cumulative grade point average or permission of instructor.

47- (67-) Topics: [Selected Area] (1-6) Topics in selected areas of Family and Consumer Sciences for students showing special ability and interest. The subject matter area is indicated by the third digit: 0 for Family and Consumer Sciences, 1 for Child and Family Studies, 2 for Food Science and Nutrition, 3 for Consumer Resource Management, 4 for Interior Design, 5 for Textiles and Clothing, 6 for Family and Consumer Sciences Education and 7 for Dietetics. Must be requested in advance of registration. May repeat enrollment up to six (6) credit hours. Prereq: Departmental and instructor's approval.

48-, 49- Supervised Field Experience (1-5, 1-5) Supervised work experience in off-campus placement matched to the student's curriculum and career goals. May be repeated with variable credit up to a maximum of five hours in 48- and five hours in 49- depending on available resources and student's course load at time of registration. Scheduling arrangements must be made through the adviser and the department chair at least one semester prior to registration. The third digit will follow the pattern described in FCS 47- (67-). Prereq: Senior standing and minimum of 2.50 cumulative grade point average.

700 Non-Thesis Graduation Completion (2)
Required for the non-thesis student not otherwise registered during any semester when such a student uses university facilities and/or faculty time before degree completion. May repeat enrollment. P/N only.


760 Perspectives in Family and Consumer Sciences (3) Philosophical and historical examination of disciplines constituting family and consumer sciences. Integrating theories and practices which define individuals and families in their near environments.

77- Trends in Family and Consumer Sciences [Selected Area] (1-6) Recent advances in selected areas of family and consumer sciences, their impacts and implications for new programs and curricular considerations. The selected area is indicated by the third digit as described for FCS 47- above. Must be requested in advance of registration. Prereq: Consent of chair and instructor. May repeat enrollment up to six (6) credit hours.

791 Research Methods in Family and Consumer Sciences (3) Topics and methods in family and consumer sciences research. Development of research proposals.

792 Research Seminar in Family and Consumer Sciences (3) Interpretation of research literature; focus on selected areas for written and oral presentations.

Family and Consumer Sciences Education (FCSE)
The Department of Family and Consumer Sciences cooperates with the College of Education and Behavioral Sciences in preparing students for teacher certification. Enrollment in the following courses requires prior assessment for admission to teacher education. Students must meet the admission criteria as described.

330 Introduction to Vocational Family & Consumer Sciences Education (2) Program planning in Consumer and Homemaking and Occupational Family & Consumer Sciences. Implications of TIM and other models of teaching for curriculum planning. Leadership and supervision for Family, Career and Community Leaders of America programs and activities. Measurement and assessment. Prereq: Admission to Teacher Education.
340 Methods of Teaching Family & Consumer Sciences (3) Learning and teaching styles. Examination of various instructional strategies, equipment and resources. Computer aided instruction. Student, parent and teacher relationship and counseling. Prereq: Admission to Teacher Education.

404 Student Teaching in Family & Consumer Sciences (6) Supervised teaching experience in off-campus centers for the entire semester. Coreq: TCED 401, FCSE 405. Prereq: Admission to Teacher Education.

405 Student Teaching in Family & Consumer Sciences (6) Supervised teaching experience in off-campus centers for the entire semester. Coreq: TCED 401, FCSE 404. Prereq: Admission to Teacher Education.

713 Human Relationships in the Classroom (3) Basic needs of individuals, social values and techniques of interpersonal relations in developing effective secondary home economics programs.

722 Evaluation in Family & Consumer Sciences Education (3) Purposes, fundamental principles and techniques.

Finance (FIN)

160 Personal Financial Management (3) An introductory course designed to teach students how to manage their personal finances enabling them to function responsibly in today’s society. Topics include the responsible use of credit (including credit cards), savings and investments, taxes, real estate, employee benefits and retirement planning. The societal effects of money management decisions including bankruptcy, divorce, predatory lending and national savings rates are addressed.

301 Managerial Finance (3) The domestic and multinational corporation, its operating, legal and tax environment. Financial analysis, long-term investment decisions, capital structure, management of working capital, sources of long-term financing and failure. Prereq: ACCT 201 or ACCT 300; and ECON 201 or 202.

302 Intermediate Managerial Finance (3) An advanced course in financial management designed to cover theory and practice of the management of the finance function in corporations. Topics covered include capital budgeting, the theory and practice of capital structure, leasing, capital asset pricing model, long-term financing, expansion and synthetic securities. Prereq: FIN 301.

311 Investment Analysis (3) An introductory course on the basics of investing in bonds and common stocks. Topics covered include the operations of stock and bond markets, fundamental and technical analysis of stocks, bond portfolio management, options and futures. Prereq: FIN 301.

313 Analysis of Financial Statements (3) An in-depth study of current financial reporting practices; analysis and interpretation of corporate financial statements. The course includes an extensive review of financial accounting concepts. Prereq: FIN 301.

332 International Finance (3) Financing the multinational corporation, hedging arbitrage, foreign exchange, Eurodollar and Euro-bond markets and banker’s acceptances. Short-term money flows and their impact upon interest rates. Devaluation and its impact upon the balance sheet and other topics. Prereq: FIN 301.

341 Financial Markets and Institutions (3) A study of the wide range of markets and instruments used to finance projects and control risk in today’s global economy. Students are introduced to the operational, regulatory and transitory characteristics of capital markets and financial institutions. Topics in this application-oriented course include the monetary system, stock, bond, mortgage, futures and options markets, pension funds, investment firms, commercial banks, credit unions, mutual funds and insurance companies. Prereq: ACCT 201 or 300, and ECON 201 or 202.

351 Commercial Banking (3) A comprehensive study of commercial banks and their role in the economy. The course emphasizes the practical application of business and economic principles as they relate to bank management and regulatory policy. Topics covered include banking history and regulation, consumer and commercial credit analysis, asset and liability management, risk management, loan policy and money management services. Trends such as consolidation, on-line banking, internationaliza-
tion and project-line expansion are also addressed.  
Prereq: FIN 301.

370 Principles of Real Estate (3) A survey course in the economic and financial aspects of investing in real estate. Urban economic growth and development, property valuation, mortgage and equity financing, mortgage market operations, portfolio analysis, taxation and investment analysis will be covered. Emphasis of the course is on home ownership and investing in small income-producing properties.  
Prereq: ECON 202.

411 Portfolio Management (3) A course applying security analysis concepts to the management of the TVA Investment Challenge portfolio. Students will be responsible for portfolio management decisions and security selection in managing the TVA portfolio. This course is designed to permit students to apply their knowledge of investment analysis to the management of an equity portfolio that is part of the competitive program sponsored by the Tennessee Valley Authority.  
Prereq: FIN 311.

471-479 Topics in Finance (3) Selected topics in finance offered on an occasional basis for qualified students. Admission by permission of instructor only.

480 Internships in Finance (1-9) Supervised work experience in business establishments, institutions, or other organizations matched to the student's curriculum. May be repeated for up to a total of nine hours internship credit. A maximum of six hours may be used to fulfill degree requirements. Pass/Fail.  
Prereq: Departmental approval required; at least Junior standing.

491-492 Independent Study in Finance (3, 3) Special research projects undertaken individually under the supervision of the faculty. Maximum credit available for independent study courses is six hours.  
Prereq: Senior standing.

493 Financial Policy Analysis (3) A capstone case course in corporate finance which integrates financial management in the decision-making process of the firm. Special topics include working capital, financial structure of the firm, dividend policy, mergers and acquisitions, bankruptcy and reorganization.  
Prereq: FIN 301, 302.

710 Corporate Financial Management (3-4) An analysis of the problems associated with the internal financial management of business enterprises through the application of decision-making methods.  
Prereq: ACCT 711 or 201 or 300.

711 Investment and Portfolio Management (3) An introduction to the theory and practice of security analysis and the management of investment portfolios, with emphasis on investment management by institutional investors. Topics covered include fundamental and technical analysis of common stocks, asset allocation strategies, management of equity and debt portfolios, options, futures, hedging and derivative securities. Students will be involved in the management of a stock portfolio.  
Prereq: FIN 710 or both ACCT 711 and FIN 301.

721 Banking and Financial Services (3) An interactive seminar that brings students, faculty and industry leaders together to study and discuss critical issues facing today's financial services industry. The course will address the full range of financial services including investment and commercial banking, insurance, pension plans, risk management, mutual funds, e-commerce and personal and business planning. Leadership, customer service and marketing issues will be discussed. Finally, the course will provide a comprehensive overview of the structure of the financial system, interest rate and business cycle determinants and international financial markets.  
Prereq: FIN 710 or both ACCT 711 and FIN 301.

732 International Corporate Finance (3) The study of financial management of the international operations of corporations including exchange risk, capital budgeting, political risk and the management of working capital. Current topics in international finance will also be covered in areas such as hedging, risk management, futures and options.  
Prereq: FIN 710 or both ACCT 711 and FIN 301.
Fine Arts (FA)

300 Computers and Media for the Arts (3)
Exploration of relevant computer software programs, various media platforms and digital technology applications for use in the pedagogy and studio instruction methods for the visual and performing arts. Projects will utilize the computer and digital media technology in the design and distribution of projects and curricular materials as well as for research and class presentations. Graphic Design emphasis students may not use this course as a supporting course in the Arts elective. Prereq: B.F.A. majors only, ART 221-222, and ART 241-242 or permission of the instructor.

310 Aesthetics (3) A basic course in aesthetics, dealing with such conceptual issues as the criteria of identity for works of art, the idea of style, of expression, the notion of aesthetic attitude, the relevance of artists’ intentions to interpretation and truth in literature and the arts. Analysis of these and similar notions with reference to examples from various art forms (painting, music, literature, etc.). Written reports and oral presentations are required. (Same as PHIL 310)

350 Fine Arts in Early Childhood (3) Methods and activities in music, art, drama and movement (dance) for children from birth to eight years.

410 Art Theory and Criticism (3) A study of historical and contemporary thought and process of art theory and criticism. The student will gain an appreciation of how their work will be understood or interpreted in a critical, professional setting.

467 Travel Study (Selected Topics) (3) A course designed as an educational travel experience in the fine arts, including one or more of the following: art history, dance, graphic design, theatre, studio art. Student may repeat course for credit. Requires instructor’s approval.

Food Science (FSCI)

200 Food Principles (3) Basic principles of food science in developing products of standard quality. Influence of composition and treatments on properties of food. Standard methods of food preparation with emphasis on quality and safety. Two one-hour lectures and one two-hour lab.

313 Food Management (3) Food for families and individual consumers. Bases for selection, costs, food values, safety, legislation. Etiquette and aesthetics associated with planning and serving food. Two one-hour lectures and one two-hour lab.

332 Nature of Food (3) Composition of food. Chemical, physical and microbiological factors related to characteristics and response to treatments. Two one-hour lectures and one two-hour lab. Prereq: CHEM 310, CHEM 319L, and MBIO 251, or equivalent.

403 (603) Experimental Study of Food (3) Applications of experimental method to food materials. Evaluation of food products by objective measurements and sensory assessments. One one-hour lecture and two two-hour labs. Prereq: FSCI 332, CHEM 310, CHEM 319L, or equivalent.

701 Advanced Food Science (3) Applications of research methods to individual problems. Prereq: FSCI 403 or equivalent.

704 Developments in Food Science (3) Emphasis on function of food components, safety and utility in food product development.

Food Systems Management (FSGM)

203 Orientation to Food Service Systems (3) Identifying types of establishments, service and career opportunities. Field trips and lab experience. Two one-hour lectures and one three-hour lab.

312 Quantity Food Management (3) Principles of food materials handling and menu planning for volume feeding. Lab experience in quantity food procurement, preparation, service, personnel management and sanitation. One one-hour lecture and two two-hour labs. Prereq: FSMG 203 or instructor’s approval.

410 Food Service Systems (3) Synthesis of administrative functions in organizing and managing food service systems; emphasis on identifying resources to meet the needs of the system and on
means for providing quality assurance in food and nutrition services. **Prereq/Coreq:** FSMG 312 or instructor’s approval.

### 413 Food Systems Design (3)
Principles of design for physical facilities of food service systems based on needs of the systems. Layout and equipment specifications according to economic and technical requirements. **Prereq:** FSMG 312 or instructor’s approval.

### 415 Standards of Professional Practice (2)
The dietetics profession and the development of practitioners. Laws, regulations and other factors affecting dietetics practice. Taken during semester when FCS 487 and 497 Supervised Field Experience in Dietetics are scheduled. **Prereq:** Senior Standing and 2.50 GPA.

### 711 Administration of Food and Nutrition Services (3)
Organization and direction of systems which provide food and nutrition services to consumers as individuals and groups.

### 713 Financial Management of Food Systems (3)
Collection and analysis of data for maintaining control of assets in various food systems.

### 714 Preprofessional Practice I (3)
Two-hundred-eighty hours of supervised practice plus 40 hours of lecture-discussion/independent study addressing the didactic aspects of dietetic practice in food systems management. This course consists of rotations in menu management, procurement, quantity food production, patient and non-patient food delivery and services, sanitation and safety (HACCP), cost/quality control, financial operational reporting and staff relief. **Prereq:** Admission to Dietetic Internship.

### 716 Experimental Quantity Food Study (3)
Analysis of problems in production, holding and service of food produced in quantity. Use of management resources in lab settings. **Prereq:** FSMG 312 or consent of instructor.

## French (FREN)

### 111 Elementary French (4) (TBR: FREN 1010)
An introductory course emphasizing listening, speaking, reading and writing. May be used to remove a language deficiency or for students with no prior experience in this language. After passing 111, students will take the second semester of the elementary sequence, 122. Three one-hour lectures and two one-hour labs.

### 115 Transitional French (4) A review of listening, speaking, reading and writing for students who have had two years of French at the high school level or equivalent as determined by the department. After passing FREN 115, students will take the second semester of the elementary sequence, FREN 122. Three one-hour lectures and two one-hour labs. **Prereq:** FREN 111 or 115 or the equivalent as determined by the department.

### 122 Elementary French (4) (TBR: FREN 1020)
An introductory course emphasizing listening, speaking, reading and writing. Three one-hour lectures and two one-hour labs. **Prereq:** FREN 111 or 115 or the equivalent as determined by the department.

### 222 Intermediate French (4)
Grammar review, reading, writing and conversation. Three one-hour lectures and two one-hour labs. **Prereq:** FREN 122 or equivalent as determined by the department.

### 250 France Today: The French People and Their Culture (3)
An interdisciplinary study of the French people today, with emphasis on their life-styles, customs, mentality and overall culture. Discussion of current trends in French politics, education, media, religion and literature and the arts (including popular culture) especially as they illustrate important cultural values and attitudes. Consideration of France’s cultural influence on selected areas of the francophone world (e.g., sub-Saharan Africa and Quebec). Taught in English.

### 300 (500) Intensive Conversation in a Foreign Country (3)
In-residence training in the foreign language of the area visited. The course elected must be approved in advance by the Chair of the Department of Modern Foreign Languages. Research project required for graduate credit. **Prereq:** FREN 222 or equivalent.

### 311 (511) Introduction to French Literature and the Arts (3)
Analysis of literary and critical texts as well as art to illustrate the most commonly identified characteristics of major schools of thought and major periods from the Middle Ages to the present. **Prereq:** FREN 341 or 342 or instructor’s approval.
Introduction to French Civilization and Material Culture (3) A descriptive and critical approach to French history, geography, religious, political, social, educational and economic institutions. Prereq: FREN 341 or 342 or instructor's approval.

Advanced Conversation (3) Emphasizes conversational skills. Oral practice to extend range of topics, vocabulary, fluency and conversational strategies. Study of the phonetic system of the French language and exercises to improve pronunciation. Grammar appropriate for oral French. Discussions utilizing readings and electronic media such as videos and the internet. Class presentation of research project required for graduate credit. Heritage speakers and those with near-native abilities in French are not eligible to take this course. If they intend to major in French or earn a Certificate of Proficiency, they should see the department chair for a waiver. Prereq: FREN 222 or instructor's approval.

Advanced Composition (3) Emphasizes composition skills. Written practice to extend range of topics, vocabulary, fluency and compositional strategies. Grammar and stylistics appropriate for written French. Practice writing expository and creative prose, translations as well as use of internet discussion lists. Class presentation of research project required for graduate credit. Prereq: FREN 222 or instructor's approval.

Masterpieces of French and Francophone Literature (in English Translation) (3) In-depth discussion of selected literary masterpieces from France and other francophone countries. Emphasis on characters, themes and social trends which reflect the culture and traditions of the francophone world. No knowledge of French required; taught in English. Does not count towards major, minor or Certificate of Proficiency in French. Prereq: ENGL 111-112.

Studies Abroad (3) In-residence study of the literature, language, or civilization of the area visited. Relevant field trips. Must be approved in advance by the Chair of the Department of Modern Foreign Languages. Research paper required for graduate credit. Prereq: FREN 341 or 342.

Travel Study (1-3) A combination of travel and study experiences in the U.S. or abroad designed to enrich students’ knowledge of the target foreign language and culture. May be taught as an organized study tour under faculty supervision or as an independent travel and study project with prior department approval. Topics, prerequisites and course requirements announced in advance. Research paper required for graduate credit. Students may repeat course with change of topic for maximum of six hours credit. Chair of the Department of Modern Foreign Languages approval must be obtained for travel-study courses to count towards minor, major, or Certificate of Proficiency. Not regularly offered.

Survey of French Literature (3, 3) Selected readings to give students an acquaintance with important personalities, movements and ideas in French literature. 381: Beginning to 17th century. 382: 18th century to present. Research paper required for graduate credit. Prereq: FREN 341 or 342 or departmental approval.

Foreign Language Internship (3) Utilization of the target foreign language in a monitored work environment. Appropriate placements may be found locally, nationally, or abroad. Students may or may not be paid. Evaluation by both supervising instructor and on-the-job supervisor. Chair of the Department of Modern Foreign Languages approval must be obtained for internships to count towards minor, major, or Certificate of Proficiency. Prereq: FREN 341 or 342.

The Language of Business and the Professions (3) Study of the basic terminology and documents of business and various professions as practiced within the francophone world. In addition to business, professions such as communications, travel and tourism, agriculture and criminology will be covered. Composition of business letters and résumés, translation and presentation of oral reports. Research paper required for graduate credit. Prereq: FREN 341 or 342 or instructor's approval.

French Cinema (3) A survey of French cinema from the turn of the century to the New Wave of the 1960s and ’70s. Discussion of the films of major French directors with emphasis on how each film contributes to the development of a national tra-
dition and reflects important issues in French society. Research paper required for graduate credit. **Prereq:** FREN 341 or 342 or instructor’s approval.

### 495-496 (695-696) Topics in French Language, Literature, or Civilization (1-3, 1-3)
Study of selected aspects of French language, literature, or civilization. Taught in French. Topics and prerequisites announced in course schedule. Research paper required for graduate credit. Students may repeat course with change of topic. Only six hours of topics courses may count towards a minor, major, or Certificate of Proficiency. Not regularly offered.

### 498-499 (698-699) Independent Study (1-3, 1-3)
Directed reading or research under supervision of a staff member. Available only to Juniors and Seniors having completed at least six hours of upper-division coursework in French. Project must be approved by faculty in the discipline concerned and the department chair. Research paper required for graduate credit. Students may take no more than six hours of independent study.

### General Studies (GENS)

#### 101 General Studies, Seminar in Freshman Studies (2)
Study and small group discussion of problems commonly encountered by students making the transition from high school to college. Assigned reading on current topics, informational programs presented by major academic units, academic and career planning placement and proficiency testing in addition to a general orientation to the university, are the major aspects of the course.

#### 111-499 General Studies, Minicourses (1 credit hour for each course with a limit of three courses)
Topics of mutual interest to students and faculty designed to provide a quick response to interests and needs of students and faculty. Proposed courses should be submitted to either the Division of Academic Affairs or the Division of Student Affairs for approval and scheduling. The following requirements are suggested for establishment of minicourses.

1. At least one faculty member must endorse each course proposal submitted by students.

Endorsement implies that one will teach the course or arrange for one’s colleagues to teach it as visiting professors. Faculty may also propose courses.

2. The grading system would be Pass/Fail or letter grade by departmental request.

3. Students are required to meet the academic standards established by the teacher at the onset of the course. These may include a syllabus of readings, an examination, an essay or term paper, research project, field project, or creative work. Discussion and informality, however, will be stressed and every effort made to avoid the pressures associated with the regular curriculum.

4. Students taking 12 hours or more are eligible to enroll. No more than three such courses may be taken by undergraduates. Courses will count as electives.

#### 201 Career Exploration (2)
Development of an understanding of the relationships between aptitudes, interest and values and successful career decisions. Includes career testing and counseling current trends in job supply-demand and salaries, relationship of academic major to career fields, use of the university catalog in academic planning and research on specific careers. Designed to create the basis for an informed career decision.

#### 211 College Study Skills (2)
Assists the student in developing practical techniques to enhance academic success in college. Topics include goal setting, time management, self-esteem, concentrating and remembering, listening, note-taking strategies, study notes, researching and writing papers, preparing for tests. Meets two times per week.

#### 300 Fundamentals of Career Entry (1)
This course is designed to prepare students for careers after graduation by making students aware of career choices, aiding students in résumé writing, teaching interview techniques and helping students to prepare for entry into the work force. Graded on a Pass/Fail basis.
301 Portfolio Development (3) This course requires students to develop a portfolio that they can then use to document prior life/work experience. An expanded version of this document serves as documentation to support an award of credit for college-level learning gained through experience. Students will enhance their research skills by compiling and organizing documents that will constitute proof of their creditable experience; develop their persuasive writing skills by presenting how these documents substantiate their claim that prior work and/or experience should be given course credit; and develop their ability to document resource materials correctly for the field(s) in question. **Prereq:** an autobiographical essay to be used as a diagnostic tool for writing skills and creditable learning experience and approval of the instructor. Graded on a Pass/Fail basis.

400 Senior Seminar (3) Assessment of personal and academic potentials for professional careers. This course is designed to prepare students to enter the workplace or change jobs. Students will explore real world work issues and key issues in the students’ selected field of study through examination of crucial past, present and future information, concepts, policies and practices. Course will include the development and/or enhancement of skills in résumé writing and interviewing.

**Geography (GEOG)**

151 Introduction to Regional Geography: North America, Europe and Russia (3) An integrated study of the cultural, economic, political and physical aspects of countries and regions within North America, Europe and Russia.

152 Introduction to Regional Geography: Asia, Africa and Latin America (3) An integrated study of the cultural, economic, political and physical aspects of countries and regions within Asia, Africa and Latin America. GEOG 151 and 152 do not have to be taken in sequence.

180 Topics in Geography (1–4) Study of special topics or travel-study experiences at an introductory level not requiring extensive prerequisites in the discipline. **Prereq:** Instructor's approval.

201 Introduction to Physical Geography (3) An introduction to patterns and processes that shape earth's natural environments.

202 Introduction to Cultural Geography (3) An introduction to patterns and processes of the world's cultural systems, landscapes and built environments. GEOG 201 and 202 do not have to be taken in sequence.

210 Methods in Geoscience (2) Survey of the field and lab methods and associated technology commonly used by geologists and geographers. Topics include: nature of spatial data, map interpretation, basic GPS and GIS, remote sensing, microscope analyses, research design, field study design and implementation, conducting literature searches, scientific and technical writing, preparation of oral presentations, geostatistics. **Prereq:** GEOL 110-120 or GEOG 151-152 or GEOG 201-202. (Same as GEOL 210)

305 Principles of Meteorology (3) An introduction to the elements and processes that shape the weather. Weather observation techniques, weather analysis and forecasting will be emphasized. Atmospheric hazards and air quality issues will also be presented.

310 Principles of Geographic Information Systems (3) An introduction to Geographic Information Systems as a tool with which to construct and conduct computer-based spatial analysis and mapping. Topics related to data acquisition, database development, fundamental analytical procedures and cartographic output are emphasized.

355 (555) Principles of Geomorphology (3) A study of the process mechanics operating within the earth's surficial systems and the resultant landforms derived from these processes; information obtained is used to analyze how landform history manifests past climatic or tectonic phenomena. Students cannot receive credit for GEOG 355 (555) and GEOL 451 (651). **Prereq:** GEOL 110 and either GEOL 120 or instructor's approval. (Same as GEOL 555/555)

364 (564) Introduction to Remote Sensing (3) An introduction to the principles and concepts of remote sensing as a tool for geographic inquiry. Emphasis will include the nature of remote sensing.
images (photographs, satellite imagery, radar) and their analysis and interpretation for applications in geographic inquiry and environmental assessment. Prereq: Junior standing; GEOG 201 or permission of instructor.

365 (565) Tennessee’s Geologic and Cultural Landscapes (3) Lectures and field excursions emphasizing the interactions of geology and culture in Tennessee. Geologic topics include: physiographic regions and geologic history, landforms, structural and tectonic history, natural and economic resources and environmental issues across the state. Cultural topics include: settlement history, economic development, political patterns and distribution of populations. Attention is given to current state issues. Prereq: GEOG 201-202. (Same as GEOL 365/565)

375 (575) Earth Systems Science (3) Investigations in Earth Systems Science using inquiry-based exploration of Earth’s processes and environments including the lithosphere, atmosphere, biosphere, hydrosphere and atmosphere. The course will focus on Problem-Based and Student-Centered learning techniques, so it will be especially applicable to anyone intending to or currently engaged in teaching science courses. The course is taught completely online, with the participant doing a combination of individual and group coursework via an asynchronous discussion board. An optional field trip for hands-on learning will be made available. Prerequisites for graduate credit: Bachelor’s degree or Senior standing and permission of the instructor. Prereq for undergraduate credit: Minimum of eight (8) hours of undergraduate lab-based science and permission of the instructor. (Same as GEOL 375/575)

380 (580) Geography of North America (3) A region-by-region examination of the United States and Canada. The physical features, settlement histories, agricultural production, industrialization, urbanization, political problems and cultural practices of North America’s regions will be emphasized. Prereq: Junior standing.

381 (581) Geography of Europe (3) A systematic study of the cultural, economic, political and physical characteristics of Europe. Prereq: Junior standing.

410 Geographic Information Systems: Modeling and Applications (3) A systematic study of the development of a GIS to produce analytical and spatial models of the natural and cultural environments. Data base development and spatial modeling will be emphasized. Prereq: Junior standing or permission of instructor.

441-442 (641-642) Travel-Study (3, 3) A faculty-supervised domestic and/or international educational group tour. A maximum of six credit hours can be counted towards a major.

444 Geography Internship (3-9) Provision for an advanced geography student to benefit by supplementary practical experiences in a particular branch of Geography. Specific assignments are arranged in consultation with an adviser during the semester preceding that in which the student expects to enroll in this course. Course performance is based on specific academic and work assignments. Grades will be based upon academic performance and work evaluation by a job supervisor. The internship may or may not include monetary compensation. This course can be taken only once. Prereq: Permission of supervising instructor and Junior standing.

461 (661) Economic Geography (3) A study of the spatial patterns, processes and developmental aspects of production. Concepts, models and current literature related to the geography of agriculture, mining, manufacturing, retailing and services are examined. Prereq: Junior standing.

462 (662) Political Geography (3) A study of the spatial forms and processes of political phenomena. Concepts, models and current literature related to territories such as nation-states and congressional districts, the formation and dissolution of empires, geopolitics and international conflict are examined. Prereq: Junior standing.

471 (671) Cartography (3) An introduction to map interpretation and design. Concepts and techniques related to map preparation, data management, the use of thematic symbols and graphic design are presented. Prereq: Junior standing.
472 (672) Climatology (3) A non-mathematical analysis of systematic and regional atmospheric behavior. First part of course deals with basic physical laws affecting the elements of weather. The second part of the course examines the distribution of climates and the impact of climates on human activity. **Prereq**: Junior standing.

481 Research Practicum (3) A seminar course in which upper-division students undertake a research project under faculty supervision and guidance. The student will be responsible for the project selection, a literature review, research design, analysis and a final report. Students will be required to submit a formal written paper and to present an overview of their project through an oral presentation to a faculty committee. In addition to the research project requirements, students must also formally submit a Portfolio consisting of original copies of substantive papers, maps and other work produced through assignments completed in other upper-division geography courses. **Prereq**: Senior standing and permission of instructor.

491-492 (691-692) Special Topics in Geography (1-3, 1-3) Seminars or guided readings on a selected topic in geography. A maximum of six credit hours can be counted towards a major. **Prereq**: Permission of instructor.

**Geology (GEOL)**

110 Introduction to Physical Geology (4) An examination of the composition and structure of the earth and its internal and surface processes with applications to the environment, natural resources and geologic hazards. Three hours lecture and two hours lab. Students cannot receive credit for both GEOL 110 and GEOL 111. GEOL 110 is a prerequisite to GEOL 120.

110H Honors Introduction to Physical Geology (4) See GEOL 110 above for course description and general limitations. This course is open to students who are participants in the Honors Program. Other students who have demonstrated superior academic ability may be eligible to register for this course as well and must receive consent of the instructor prior to enrollment. (Same as GEOL 110 but for Honors credit and may not be taken in addition to GEOL 110.)

120 Environmental Geology (4) The application of the principles of physical geology to environmental problems, including pollution, natural hazards and resource production. Topics include: volcanic, earthquake, flood and landslide hazards; surface and ground water pollution, economic resources and reserves including transportation, production and use; and broader issues such as global warming. Three hours lecture and two hours lab. **Prereq**: GEOL 110.

120H Honors Environmental Geology (4) See GEOL 120 above for course description and general limitations. This course is open to students who are participants in the Honors Program. Other students who have demonstrated superior academic ability may be eligible to register for this course as well and must receive consent of the instructor prior to enrollment. (Same as GEOL 120 but for Honors credit and may not be taken in addition to GEOL 120.)

121 Engineering Geology (3) The elements of physical and historical geology as they relate to engineering practice. Not to be taken by Geology majors or minors. Two hours lecture and two hours lab.

210 Methods in Geoscience (2) Survey of the field and lab methods and associated technology commonly used by geologists and geographers. Topics include: nature of spatial data, map interpretation, basic GPS and GIS, remote sensing, microscope analyses, research design, field study design and implementation, literature searches, scientific and technical writing, preparation of oral presentations, geostatistics. **Prereq**: GEOL 110-120 or GEOG 151-152 or GEOG 201-202. (Same as GEOG 210)

315 (515) Principles of Oceanography (3) Survey of the physical, chemical, biological and geological processes occurring in the world’s oceans, including natural resources for legal-political problems associated with the marine environment. Course is designed for science and science education majors. Students cannot receive credit for both GEOL 315 and GEOL 310. **Prereq**: one year sequence in a science or permission of instructor for graduate credit.

320 (520) Mineralogy (4) A study of the crystallography, classification, identification and the systematics of mineral families. Lab includes hand
specimen analytical methods of identification. Three hours lecture and two hours lab. Students cannot receive credit for GEOL 320 (520) and GEOL 318 (518). Prereq: GEOL 110, CHEM 121, and MATH 140 or equivalent.

325 (525) Fossils: Life Through Time (3)
Hands-on approach using fossils to explore the 4.6 billion year history of life on Earth. Topics include: origin of life; rise of multicellularity and Eukaryotes; advent of shell, bone and teeth; Vendian-Cambrian explosion of life; marine invertebrate ecosystems through time; origin and evolution of primary plant groups; origin and evolution of the major vertebrate groups (fish, amphibians, reptiles, birds, mammals, humans); colonization of land by plants and animals; evolution of flight in insects and vertebrates; mass extinction events and the demise of Earth’s biodiversity. Prereq: GEOL 110 or BIOL 120 or permission of instructor. GEOL 350 recommended.

330 (530) Igneous and Metamorphic Petrology (4)
A study of the genesis, classification and identification and tectonic setting of igneous and metamorphic rocks. Lab includes hand specimen and optical methods of identification. Three hours of lecture and two hours of lab. Students cannot receive credit for both GEOL 330 (530) and GEOL 331 (531). Prereq: GEOL 320 or instructor’s approval.

340 (540) History of the Earth (4)
Physical and biological evolution of Earth – past, present and future, with emphasis on scientific methods used to study the geologic record. Topics include: geologic time, rocks and fossils as historical archives, reconstructing ancient environments, global sea level and atmosphere change, plate tectonics and mountain building, mechanisms and evidences of organic evolution and a survey of Earth’s past and present biodiversity. Three hours lecture and two hours lab. Prereq: GEOL 110.

345 (545) Natural Hazards (3)
An advanced examination of volcanic hazards, earthquakes, flooding, mass movement, subsidence, extraterrestrial impacting and the geological implications of extreme weather events. Societal implications and remediation of these hazards is emphasized. Project required. Three hours lecture. Prereq: GEOL 110 and 120.

350 (550) Principles of Paleontology (4)
Field and lab techniques used to obtain information from fossil-bearing rocks and sediment. Major topics of emphasis include: paleoecology, functional morphology, evolutionary theory, extinction processes and paleobiogeography. Lab exercises will stress the use of common fossil taxa as paleontological tools to address issues in earth history. Students cannot receive credit for GEOL 350(550) and GEOL 351(551). Three hours lecture and two hours lab. Prereq: GEOL 110 or instructor’s approval.

355 (555) Principles of Geomorphology (3)
A study of the process mechanics operating within the earth’s surficial systems and the resultant landforms derived from these processes; information obtained is used to analyze how landform history manifests past climatic or tectonic phenomena. Students cannot receive credit for GEOL 355(555) and GEOL 451(651). Prereq: GEOL 110 and either GEOL 120 or instructor’s approval. (Same as GEOG 355/555)

360 (560) Sedimentology (3)
A study of principles of sedimentology, sedimentary petrology, depositional processes and environments. Two hours of lecture and two hours of lab per week. Students cannot receive credit for both GEOL 360(560) and GEOL 411(611). Prereq: GEOL 110 and 120. Recommended: GEOL 320.

365 (565) Tennessee’s Geologic and Cultural Landscapes (3)
Lectures and field excursions emphasizing the interactions of geology and culture in Tennessee. Geologic topics include: physiographic regions and geologic history, landforms, structural and tectonic history, natural and economic resources and environmental issues across the state. Cultural topics include: settlement history, economic development, political patterns and distribution of populations. Attention is given to current state issues. Prereq: GEOL 110-120 or GEOG 201-202. (Same as GEOG 365/565)

370 (570) Principles of Stratigraphy (2)
Methods of correlating rock strata according to North American Stratigraphic Code including lithostratigraphy, chronostratigraphy and biostratigraphy. Two hours lecture per week. Prereq: GEOL 360.
375 (575) Earth Systems Science (3) Investigations in Earth Systems Science using inquiry-based exploration of Earth’s processes and environments including the lithosphere, atmosphere, biosphere, hydrosphere and astrosphere. The course will focus on problem-based and student-centered learning techniques, so it will be especially applicable to anyone intending to or currently engaged in teaching science courses. The course is taught completely online, with the participant doing a combination of individual and group coursework via an asynchronous discussion board. An optional field trip for hands-on learning will be made available. Prerequisites for graduate credit: Bachelor’s degree or Senior standing and permission of the instructor. Prereq for undergraduate credit: Minimum of eight (8) hours of undergraduate lab-based science and permission of the instructor. (Same as GEOG 375/575)

400 (600) Structural Geology (4) Description and interpretation of deformation processes and common geologic structures such as folds, faults, joints and cleavage. Lab topics include: map interpretation, depth and thickness problems, construction of structure sections, structure contour maps, stereonets. Three hours lecture and two hours lab. Prereq: GEOL 330, 370.

445 (645) Geohydrology (3) A study of the water cycle, especially those parts dealing with streams, ground water and water quality. Two hours lecture and two hours lab. Prereq: MATH 140, GEOL 110, CHEM 121.

450 Methods in Field Geology (3) Students will participate in field projects during their senior year. Methods include measurement, description and interpretation of rock sections; use of instruments in the collection and the analysis of data; construction and interpretation of geologic maps and cross-sections; writing technical reports and the delivery of oral reports. This course is designated as the Writing and Speaking Across the Curriculum course in geology. Prereq/Coreq: Senior standing and instructor’s approval.

475 (675) Travel Studies in Geology: (Title) (1–4) Students study the geology and geologic history of a given locale through extended travel to the designated region of study. Travel sites vary each year and may be either domestic or foreign. Pre- and post-course meetings with lectures, discussion groups and independent topic research are used in conjunction with field study activities. Students are responsible for their own travel expenses, fees, personal health and life insurance and any other expenses when the semester topic requires it. This course may be repeated for credit with different topics. No more than four hours credit may be counted toward requirements for major or minor.

485 (685) Special Topics in Geology: (Title) (1–4) Intensive lectures and/or lab work on special topics in geology. Topics include, but are not limited to: Geology of State and National Parks, Geophysics, Clastic Petrology, Carbonate Petrology, Geochemistry, Paleocology, Biostratigraphy and Paleobiogeography, Economic Geology, Geoscience Education, Comparative Planetology, History of Geology, Geoarchaeology. Prereq: Instructor’s approval. This course may be repeated for credit with different topics. No more than four hours credit may be counted toward requirements for major or minor.

495 Senior Research Project (1–3) Seniors, by invitation of the geology faculty, propose and pursue research under the supervision of a faculty member. Students will submit a paper for review by a faculty committee of two or more members of the geology faculty and perhaps faculty members from other disciplines involved in the research. Graded on a Pass/Fail basis.

Geoscience Education (GEDU)

700 Advanced Earth Systems Science (3) Investigations in Earth Systems Science is a detailed exploration of Earth’s interacting global processes and environments including the lithosphere, atmosphere, biosphere, hydrosphere and astrosphere. The course uses Problem-Based and Student-Centered learning techniques and is taught completely online. A combination of individual and group coursework via an asynchronous discussion board is utilized.
710 Advanced Physical Geology for Educators (3) An advanced study of physical geology intended to provide teachers with the foundation knowledge of Earth’s internal structure, plate tectonics, rock cycle, weathering and earth materials; natural resources, geochemical cycles; and the basis for geologic time and the history and nature of science. Prereq: GEDU 700 and permission of instructor.

720 Oceanology for Educators (3) Detailed study of modern and ancient oceans. Topics include ocean floor topography and bathymetry; marine sediments and ocean floor volcanism; waves, tides and currents; air/sea interactions, ocean chemistry, marine ecosystems and evolution of ocean systems through geologic time; paleoceanography. Prereq: GEDU 700 and permission of instructor.

730 Understanding Evolution (3) Detailed study of cosmic, geologic and organic evolution and with emphasis on the history of evolutionary thought and methods scientists use to investigate evolution. Special emphasis is given to common misconceptions about evolution, includes approaches to correcting inaccuracies, incomplete knowledge and misconceptions students have about evolution as well as strategies for improving teaching and learning about evolution. Prereq: GEDU 700 and permission of instructor.

740 Field Experience in Geoscience: [Title] (1-3) Field experiences may include summer workshops or institutes, extended weekend field courses, travel courses, field camps, or extended field trips. Field experiences may have an online component, but the core of the course is practical in-the-field participation emphasizing the application of principles and methods of geoscience investigation and education. Prereq: GEDU 700 and permission of instructor.

750 Global Climate Change (3) Detailed study of the geographic patterns and physical processes of global climate change throughout Earth’s history and assessments of future climate change scenarios. The course will examine the evidence of climate change in the geologic and fossil record and investigate the various types of models that predict future climate changes. Prereq: GEDU 700 and permission of instructor.

760 Astrophysics for Educators (3) Detailed study of the formation, evolution and structure of the universe, galaxies and stars. Topics include the Big Bang model, nucleosynthesis and interstellar medium, dark matter and dark energy, stellar remnants and star nebulae, stellar activity, the Sun as a star, modern instrumentation and space missions and studying motion and light. Prereq: GEDU 700 and permission of instructor.

German (GERM)

111 Elementary German (4) (TBR: GERM 1010) An introductory course emphasizing listening, speaking, reading and writing. May be used to remove a language deficiency or for students with no prior experience in the language. Three one-hour lectures and two one-hour labs.

122 Elementary German (4) (TBR: GERM 1020) An introductory course emphasizing listening, speaking, reading and writing. Three one-hour lectures and two one-hour labs. Prereq: GERM 111 or equivalent as determined by the department.

222 Intermediate German (4) Grammar review, reading, writing and conversation. Three one-hour lectures and two one-hour labs. Prereq: GERM 122 or equivalent as determined by the department.

250 Germany Today: The German People and Their Culture (3) An interdisciplinary study of contemporary Germany, with an overview of Austria and Switzerland. Emphasis on the life-styles, customs, mentality and culture of the German people. Discussion of current trends in German society, politics, economy and the arts. Consideration of the cultural, social and political differences between Germany, Austria and Switzerland and of the leadership role that falls to Germany as the leading country in the European Union. Taught in English.

300 (500) Intensive Conversation in a Foreign Country (3) In-residence training in the foreign language of the area visited. The course elected must be approved in advance by the Chair of the Department of Modern Foreign Languages. Research project required for graduate credit. Prereq: GERM 222 or equivalent.
321 Introduction to German Culture (3) An overview of German civilization and culture of the past 1200 years in order to enhance the understanding of Germany today and its role in present-day Europe. Prereq: GERM 341 or 342 or instructor’s approval.

330 Twentieth-Century German Drama (3) Introduction to German Drama, with emphasis on the Expressionists, Brecht, new trends after World War II, the Swiss and the radio play. Taught in English. No foreign language credit. Offered in alternate years. Prereq: Six semester hours of Western world literature or instructor’s approval.

341 (541) Advanced Conversation (3) Emphasizes conversational skills. Oral practice to extend range of topics, vocabulary, fluency and conversational strategies. Study of the phonetic system of the German language and exercises to improve pronunciation. Grammar appropriate for oral German. Discussions utilizing readings and electronic media such as videos and the internet. Class presentation of research project required for graduate credit. Heritage speakers and those with near-native abilities in German are not eligible to take this course. If they intend to major in German or earn a Certificate of Proficiency, they should see the department chair for a waiver. Prereq: GERM 222 or instructor’s approval.

342 (542) Advanced Composition (3) Emphasizes composition skills. Written practice to extend range of topics, vocabulary, fluency and compositional strategies. Grammar and stylistics appropriate for written German. Practice writing expository and creative prose, translations as well as use of internet discussion lists. Class presentation of research project required for graduate credit. Prereq: GERM 222 or instructor’s approval.

350 Masterpieces of German and Austrian Literature (in English Translation) (3) In-depth discussion of selected literary masterpieces from Germany and Austria. Emphasis on characters, themes and social trends which reflect the culture and traditions of both countries. No knowledge of German required; taught in English. Does not count towards major, minor or Certificate of Proficiency in German. Prereq: English 111-112.

360 (560) Studies Abroad (3) In-residence study of the literature, language, or civilization of the area visited. Relevant field trips. Must be approved in advance by the Chair of the Department of Modern Foreign Languages. Research paper required for graduate credit. Prereq: GERM 341 or 342.

370 (570) Travel Study (1-3) A combination of travel and study experiences in the U.S. or abroad designed to enrich students’ knowledge of the target foreign language and culture. May be taught as an organized study tour under faculty supervision or as an independent travel and study project with prior department approval. Topics, prerequisites and course requirements announced in advance. Research paper required for graduate credit. Students may repeat course with change of topic for maximum of six hours credit. Chair of the Department of Modern Foreign Languages approval must be obtained for travel-study courses to count towards minor, major, or Certificate of Proficiency. Not regularly offered.

381-382 (581-582) Survey of German Literature (3, 3) 381: Beginning to Enlightenment. 382: 18th-20th Centuries. Prereq: GERM 341 or 342 or instructor’s approval.

401 Foreign Language Internship (3) Utilization of the target foreign language in a monitored work environment. Appropriate placements may be found locally, nationally, or abroad. Students may or may not be paid. Evaluation by both supervising instructor and on-the-job supervisor. Chair of the Department of Modern Foreign Languages approval must be obtained for internships to count towards minor, major, or Certificate of Proficiency. Prereq: GERM 341 or 342.

451 (651) The Language of Business and the Professions (3) Study of the basic terminology and documents of business and various professions as practiced within the Germanic world. In addition to business, professions such as communications, travel and tourism, agriculture and criminology will be covered. Composition of business letters and résumés, translation and presentation of oral reports. Research paper required for graduate credit. Prereq: GERM 341 or 342 or instructor’s approval.
491 (691) German Cinema (3) A survey of 20th century German film from inception to contemporary manifestation. Discussion of the major German directors and their impact on the medium of film. Special emphasis placed on the silent films of the prewar years, the Weimar period and the New German Cinema. Film's reflection of social, political and cultural issues in Germany highlighted throughout. Research paper required for graduate credit. Prereq: GERM 341 or 342 or instructor's approval.

495-496 (695-696) Topics in German Language, Literature, or Civilization (1-3, 1-3) Study of selected aspects of German language, literature, or civilization. Taught in German. Topics and prerequisites announced in course schedule. Research paper required for graduate credit. Students may repeat course with change of topic. Only six hours of topics courses may count towards a minor, major, or Certificate of Proficiency. Not regularly offered.

498-499 (698-699) Independent Study (1-3, 1-3) Directed reading or research under supervision of a staff member. Available only to Juniors and Seniors having completed at least six hours of upper-division coursework in German. Project must be approved by faculty in the discipline concerned and the department chair. Research paper required for graduate credit. Students may take no more than six hours of independent study.

**Graphic Design (GDES)**

322 Graphic Design (3) Computer-based design, tools and practices through actual use in the design lab. A brief history of graphic design placing issues of the new media in context with the aesthetics of visual art. Prereq: ART 221-222 and ART 241-242, or permission of instructor.

335 Graphic Design II (3) Course will continue to explore fundamental graphic design concepts and strategies as well as photo-based image editing, discussion of contemporary trends in digital media and technical standards in the field. Prereq: GDES 322 or permission of instructor.

345 Digital Photography (3) Advanced studio work specifically utilizing the digital camera and a variety of software applications to create digital imagery for multiple uses and platforms. Concentration on development of a personal aesthetic. Prereq: GDES 335.

410 Typography and Page Layout (3) An advanced studio course specifically investigating the use and function of type in historical and contemporary print production. The development of advanced page layout skills for commercial and informational design will also be integrated into this study of typography. Prereq: GDES 335.

425 Interactive Multimedia (3) An introduction to sequential interactive information delivery systems. Exploration, composition and delivery of complex multimedia content in user-driven formats such as the World Wide Web or other interactive media authoring solutions. Incorporation of digital and traditional media including sound, imagery and digital video into finished presentations which reflect visual literacy and sensitivity to digital aesthetics. Prereq: GDES 335 or permission of instructor.

435 Advertising Design (3) An advanced studio course in print- and media-based advertising design. Advertising strategy and production using industry standard computer software applications. Strong emphasis placed upon conceptual development, current graphic design aesthetics and the social context of the designer in advertising. Prereq: GDES 335 or permission of instructor.

440 Professional Practices in Design (3) Senior seminar for the examination and discussion of topics and issues related to the professional work environment in the design field and preparation of graphic design students for material and professional expectations in their discipline. A variety of topics such as portfolio presentation, career strategies and professional development through graduate studies will be covered through lectures, guest speakers and professional site visitations. Prereq: GDES 335.

450 Internship in Graphic Design (3) Application of graphic design skills and practices in a supervised assignment with an appropriate commercial or professional organization. Prereq: GDES 335 or permission of instructor.
Greek (GREK)

**110-120 Elementary Greek** (3, 3) An introduction to the Greek language; translation, writing, readings in selected classical and koiné sources, philosophical and religious. Some attention to the Greek background of medical/scientific and legal terminology. Does not meet foreign language degree requirement for B.A., B.S., B.S.C.J., or B.S.S.W. degrees. May be taken on Pass-Fail basis.

Health (HLTH)

**111 Principles and Concepts in Personal Health** (3) Development of the understandings, attitudes and practices which contribute to better individual health.

**220 Advanced First Aid and CPR** (3) Procedures for emergency care and accident prevention. American Red Cross certification in Advanced First Aid and CPR available.

**303 (503) Pharmacology and Sports** (3) Pharmacology and sports examines classifications, therapeutic uses, actions and side effect/adverse reactions of major drugs related to sports activities. That knowledge base includes, but is not limited to, pharmacokinetics, legal concerns, therapeutic outcome of drugs commonly used to treat athletes, protocols for over-the-counter medications and substance abuse.

**325 (525) Stress Management** (3) This course is designed to help people know how to cope with stress in their lives. Being able to manage stress in a positive manner enhances the potential for maximum performance both professionally and personally. This course teaches the student how to recognize negative and positive stressors and how to cope accordingly.

**330 (530) Introduction to Epidemiology** (3) Introduction to the basic principles and methods of epidemiology. Topics to be covered include the historical perspective of epidemiology, measures of disease occurrence and association, clinical epidemiology, disease screening, causal inference and study design.

**351 Substance Abuse Prevention** (3) This course examines the scope of substance abuse in the United States and explores the various strategies of prevention. Addictive behaviors, dependence and short and long term consequences of drug use and abuse including prescription drugs, illicit street drugs and ergogenic substances will be covered.

**353 Human Sexuality** (3) This course addresses the relationship between health and human sexuality, focusing on the prevention of disease, disorder and dysfunction through education. Content examines the broad range of attitudes, behaviors, knowledge, practices and myths pertaining to sexuality.

**410 Health Education and Promotion** (3) As a guide to the field of health education and promotion, this course addresses the theoretical base needed to develop behaviors conducive to well-being or a change in behaviors conducive to health. Prereq: HLTH 111.

**475 Health Methods** (3) Introduction to a variety of methods and materials that can be utilized in teaching health content. Also, emphasis on the writing of goals and objectives, the design of unit plans and lesson plans and the construction of evaluation instruments. Prereq: Admission to Teacher Education.

**485 (685) Workshop in Health: [Title of Workshop]** (1-3) Workshop on selected topics. No more than six hours workshop credit may be applied to an undergraduate or graduate degree in education. Prereq: Instructor’s approval.

**700 Developing, Implementing and Evaluating Health Promotion Programs** (3) This course examines the philosophy, rationale and guidelines for developing health promotion programs for the corporate and community sectors. This course addresses planning, developing, implementing and evaluating health promotion programs for a realistic, understandable approach to planning health promotion programs.

**703 Advanced Pharmacology and Sports** (3) In-depth examination of the therapeutic uses, actions and side effects/adverse reactions of major drugs related to sport participation. Emphasis is given to, but not limited to, current issues regarding legal concerns, over-the-counter medications and substance abuse.
775 School Health Methods (3) Review of methods and materials available for utilization in teaching health. Designed to provide additional strategies for health instruction through examination of current health literature, characteristics of effective teaching and techniques for planning and implementing effective programs in health.

Health and Physical Education (HPED)

20- Topics in Sports Officiating [name of sport] (2) Training of students in the psychology of officiating, the mechanics and court positioning to officiate interscholastic, recreational and intramural sports as selected using the third digit: 1 for basketball, 2 for baseball/softball, 3 for football, 4 for soccer, 5 for volleyball. Certifications are made available. May enroll in one or more selected sports.

308 Clinical Classroom I (3) Field-based experience for health and physical education focusing on theories and application of research in classroom management. Introduction to the language and skills of pedagogy while modeling professional behavior when applying all these skills in actual school settings. Grades K-12. Portfolio checkpoint.

309 Clinical Classroom II (3) Field-based experience for health and physical education emphasizing the development and practice of effective teaching skills as related to teaching and learning styles, strategies for teaching and models of instruction. Addresses attitudes, knowledge and skills as defined by the College of Education and Behavioral Sciences Conceptual Framework including entry level portfolio development. Grades K-5. Portfolio checkpoint. Prereq: HPED 308, 320 and HLTH 111.

310 Developmental Physical Education for Elementary and Middle School Children (3) Overview of the purpose, curriculum components and instructional approaches appropriate to developmental readiness stages of the elementary and middle school child. Prereq: Admission to Teacher Education.

320 Foundation and Sport Skills (3) Addresses historical foundations of health and physical education in addition to NASPE guidelines and curriculum issues related to developmentally appropriate locomotor, rhythmic and sport skills. Requires demonstration of performance proficiency in selected team and individual sport skills.

411 Clinical Classroom III (3) Field-based experience for health and physical education at the secondary level emphasizing pre-assessment, unit/lesson planning, implementation and evaluation. Introduction to curriculum design and implementation from a historical and education governance perspective. Prereq: HPED 309; HLTH 351, 352, 353, 354; Admission to Teacher Education.

412 Public Relations for Teachers and Coaches (2) Examines the concepts of program promotion, coordination of non-academic responsibilities and understanding relationships with administrators, teachers, parents and community. Prereq: HPED 411.


465 The Theory and Techniques of Coaching Basketball (3) Emphasis on conditioning techniques, strategies, team management, motivation, equipment selection/fitting and scheduling.

470 The Theory and Techniques of Coaching Football (3) Emphasis on conditioning, techniques, strategies, team management, motivation, equipment selection/fitting and scheduling.

475 The Theory and Techniques of Coaching Volleyball (3) Emphasis on conditioning, techniques, strategies, team management, motivation, equipment selection/fitting and scheduling.

485 (685) Workshop in Physical Education: [Title of Workshop] (1-3) Workshop on selected topics. No more than six hours of workshop credit may be applied to an undergraduate or graduate degree in education. Prereq: Instructor's approval.

490 Practicum (3) Supervised field-based experience in coaching and/or athletic related area. Application must be filed one semester prior to enrolling in practicum. Prereq: Instructor's approval.
730 Theory and Application in Sport Pedagogy (3) In-depth exploration of motor learning and development principles as it relates to the teaching-learning process for motor skill acquisition. Appropriate educational practices and intervention procedures will be discussed in relation to developing effective practice techniques and training regimes.

History (HIST)

121 Development of World Civilization I (3) (TBR: HIST 1110) Traces forms of civilization from ancient beginnings through the 17th century. Especially recommended for freshmen.

122 Development of World Civilization II (3) (TBR: HIST 1120) Traces forms of civilization from beginning of 18th century to the present. Especially recommended for freshmen.

121H-122H Honors Development of World Civilization (3, 3) Open to students who have demonstrated superior academic ability. Consent of department required. See HIST 121-122 for course descriptions. (Same as HIST 121-122 but for honors credit and may not be taken in addition to HIST 121-122).

200 Introduction to International Studies (3) An interdisciplinary course to introduce students to the important large scale issues and conditions which are active in the contemporary world. Included are global perspectives dealing with cultural, ecological, economic, geographical, political and social issues.


202 History of the United States II (3) (TBR: HIST 2020) A study of the main currents and developments in American life from 1877 to the present.

301 History and Historians (3) An upper-division course designed to introduce students to basic techniques, skills and issues of historical research, writing and teaching, including key historical concepts and methods, the nature and fields of history and historiography. Should be taken during the junior year and prior to taking HIST 499 for which it is a prerequisite. Seniors need instructor's permission to register. Required for History and Secondary History majors. Offered every fall.

302 (502) Introduction to Public History (3) Explores the various opportunities for work as a public historian and addresses the current issues and debates in the field. Students will learn about the major functions of public history work. May be followed by a semester internship in public history.

303 (503) Women in American History (3) Explores the lives of American women through the prism of class, race and ethnicity—in relationship to each other, to their families, to their work at home and in the public sphere and to their influence on American society and culture. Beginning with the European settlement of North America and continuing until the present, women's history will be woven into a presentation of the American past. (Same as WMST 304)

310 American Military History (3) American military history from the American Revolution to the present. Evaluation of significant battles from the viewpoints of the participants, their resources, decision-making techniques and the nine principles of war. Discussion of all of America's wars. Emphasis on the Civil War, World War I, World War II, Korea and Vietnam. (Same as MSL 310)

320 (520) Ancient Greece (3) A study of Greek society from Minoan civilization to the Hellenistic Age (1400-300 BC). Topics include hoplite warfare, Greek colonization, the Olympics, Sparta, Periclean Athens, the Persian and Peloponnesian Wars and the empire of Alexander the Great.

321 (521) Ancient Rome (3) A study of Rome's cultural and political development from 700BC to 400 AD. Examines Rome's origins as a small city state to its rule over a vast empire that stretched from Britain to the Middle East. Topics include the formation of the Roman Republic, expansion, civil war, imperial government and the development of Christianity.

331 History of Tennessee (3) (TBR: HIST 2030) Tennessee history from the view of the culture of the Indian tribes living in this area through early European settlement, the Revolutionary War in Tennessee and the organization of Tennessee as a state. Social
and economic life on the frontier, the culture of the pre-Civil War South, the Civil War and Reconstruction periods in Tennessee and from the Progressive era to the present.

334 Frontier History: The Atlantic to the Mississippi (3) The settlement of the eastern half of the American continent to 1850, the significance of land in the development of the colonies and the American nation, development of frontier institutions and American Indian-white contacts. Considerable attention given to agricultural developments.

335 Frontier History: The Mississippi to the Pacific (3) The settlement and economic development west of the Mississippi River from the Spanish entry through the agricultural unrest of the 1890’s. Fur traders, settlement of Texas, Oregon and California, the Mormon migration, the Mexican War, Forty-niners and other miners, American Indians, cattlemen, the Farmer’s Frontier and the Agricultural Revolution.

340 (540) The Age of Enlightenment and Revolution, 1715-1815 (3) A study of 18th century European political, social, economic and intellectual history, including the French enlightenment and its influence on Europe and America. Set against the background of military and diplomatic developments of global war, the course will examine the causes of the French Revolution and Napoleonic era.

341 (541) Restoration, Revolution and Colonialism, 1815-1914 (3) A study of the Industrial Revolution, the Congress System, the Revolutions of 1848, Bismarckian diplomacy and balance of power politics. Topics include an examination of artistic and intellectual transformations, the rise of ideologies, including Liberalism, Nationalism, Socialism and Marxism, the impact of imperialism and the causes of World War I.

342 (542) From War to War, 1914-1945 (3) A study of the course of World War I and the origins and course of World War II, with a focus on balance of power politics and the nature of total war. Topics include the impact of the Russian Revolution of 1917, Stalinism, Nazism, Fascism, the decline of Western Democracies, the ordeal of total war, the internationalization of diplomacy and the creation of modern mass welfare societies.

343 (543) Contemporary Europe, 1945 to Present (3) A study of the major political, economic, diplomatic, social and cultural developments in western and eastern Europe since 1945. Special attention is given to the European dimension of the Cold War, the demise of communism, the reshaping of the European geography since the fall of the Berlin Wall and the future of the European Union.

401 Independent Study in American History (3) Directed reading or research under supervision of a staff member. By arrangement only. Prereq: 24 hours of history with a 3.00 average (in history), 2.50 average (overall) and departmental approval.

402 Independent Study in European or Asian History (3) Directed reading or research under supervision of a staff member. By arrangement only. Prereq: 24 hours of history with a 3.00 average (in history), 2.50 average (overall) and departmental approval.

403-404 (603-604) Social and Cultural History of the United States (3, 3) Based on an analysis of gender, race, class and ethnicity, this course examines American society “from the bottom up,” looking at such issues as the environment, health and demography, religious values, industrialization, cities and suburbia, courtship, social movements, popular culture and everyday life. 1600 to 1860 (403). 1860 to Present (404).

414-415 (614-615) History of England (3, 3) A survey of English history from the Norman Conquest to the present. 1066 to 1714 (414). 1714 to the present (415).

420 (620) Late Antiquity and Medieval History (3) Examines European society from 300 to 1300, with particular emphasis on the development of the Christian church in Western Europe and Byzantium. Topics include the Papacy, asceticism and monasticism, the Frankish and Carolingian kingdoms, the Inquisition and the Crusades.

421 (621) Renaissance and Reformation (3) Examines the social, political, intellectual, artistic and religious developments in Europe from the thirteenth through the sixteenth centuries and the resulting changes, with emphasis on the Humanist movement, the Reformation and the Counter Reformation.
Modern Germany, 1815 to the Present (3) Focuses on the forces leading to the unification of Germany, the age of Bismarck, the rise and fall of the Third Reich. Concludes with a postscript on East and West Germany during the Cold War and the reunification of Germany.

African-American History I (3) This course covers the background and origin of the slave trade in Africa, the mid-passage, the nature of the slave trade in the Americas, the Africans in America both as freemen and slaves, movements to end slavery and slave resistance efforts and the role of blacks in the Civil War.

African-American History II (3) This course covers the African-Americans from the Reconstruction period to the present time. Topics included are the ending of slavery, the economic and political transition following it, the emerging debate over the role of the African-American in American life, the struggle for political and legal equality and the social and cultural development of African-Americans in the twentieth century.

History of Latin America (3) From pre-Colombian civilizations to the present, this course examines main themes such as conquest, colonialism, independence movements and economic upheavals in all regions of Latin America and the Caribbean Basin, with special emphasis on the roles of church and state (including the military) and challenges of diverse and stratified societies.

History of Mexico (3) Mexican history from pre-Hispanic civilizations (especially the Aztec Empire) to the present. Examines colonial Mexico, its movement towards independence, issues of political and economic stability, its relationship with the United States and its ongoing revolution.

History of Russia (3) A survey of Russian history from the origins of Slavic history to 1917, including Kievan Rus’, the conversion of Eastern Slavs to Christianity, the Mongol Conquest and Yoke, the Rise of Muscovy, Ivan the Great, Ivan the Terrible, the Time of Troubles, Peter the Great, the Conquest of Siberia, Catherine the Great, Russian and Enlightenment influences, the War of 1812, the Crimean War, the Great Reforms, the Russian economy in the Nineteenth Century, Russian literary monuments, the revolutionary movement and the growing threat of World War I.

Russia Since 1917 (3) A study of the Soviet Union and Post-Soviet Russia from the origins of the revolutions of 1917 to the present. Examines the ideologies and personalities that have shaped political life as a backdrop to analyze Soviet society and culture, Stalin’s reign of terror, the economic failure of Communism, Soviet foreign policy, the nationalities’ problems and the breakup of the Soviet Union in 1991.

Public History Internship (3-6) Full-time apprenticeship with a public or private historical agency or institution of local, regional, or national significance. May be taken at any time of the year and may be paid. Prereq: HIST 302, 3.0 GPA in the major. Not limited to History majors.

Topics in Diplomatic History: [Topics Title] (3) Classes allowing for an in-depth study of the nature and styles of diplomacy and of selected topics pertaining to U.S., European, or non-European diplomacy through time periods from the beginning of civilization to the present. May be repeated for credit (with different topic). Only six hours of undergraduate topics courses (460, 470, 480, or 490) can be counted toward the major or minor. Not regularly offered.

The Colonial Period and the Revolution (3) A study of the origins and development of the American colonies, with special attention given to those that formed the “original thirteen states.” Social, cultural and religious differences and developments as well as political and military events. An examination of the causes and events that brought about the rupture of the ties to England and the military and diplomatic history of the Revolutionary War.

The Constitution and the Rise of the Federation (3) A study of the problems for the Confederation after the drafting of the peace with England and an examination of the solutions found, or attempted, in the Constitutional Convention. The nature of the union formed by the ratification process and the subsequent changes in that union during the Federal Period. Review of the attempts to form a distinctly American culture.
467 (667) Travel-Study [Selected Topics] (1-3) A course designed as an educational travel experience in American History and Culture within the United States under the supervision of a university instructor. May be taught as an organized study-tour or as an independent travel and study project. Topics, prerequisites and course requirements announced in advance. May be offered on a pass/fail basis. Students may repeat course (with different topics). Not regularly offered. Requires instructor's approval.

468 (668) Travel-Study [Selected Topics] (1-3) A course designed as an educational travel experience in international history and culture in foreign countries under the supervision of a University instructor. May be taught as an organized study-tour or as an independent travel and study project. Topics, prerequisites and course requirements announced in advance. May be offered on a Pass/Fail basis. Students may repeat course with different topics. Not regularly offered. Requires instructor's approval.

470 (670) Topics in World History: [Topics Title] (3) Classes in selected aspects of world history dealing with a global or comparative approach, such as, but not limited to, urbanization, technology, sports, disease, climate, demographics, food, rise and fall of civilizations, transportation, industrialization and migrations. May be repeated for credit (with different topic). Only six hours of undergraduate topics courses (460, 470, 480, or 490) can be counted toward the major or minor. Not regularly offered.

480 (680) Topics in U.S. History: [Topic Title] (3) Classes in one or more of the following areas: (a) interdisciplinary approaches to historical periods and (b) specialized topics suitable for in-depth study. May be repeated for credit (with different topic). Only six hours of undergraduate topics courses (460, 470, 480 or 490) can be counted toward the major or minor. Not regularly offered. (Same as WMST 480 when topic offered is on gender issues in history.)

481 (681) China and Japan to 1800 (3) A survey of the traditional civilizations in China, Japan and Korea. Emphasis on their development, interactions, divergencies and the early impact of the Western presence in East Asia.

482 (682) China and Japan, 1800 to the Present (5) An inquiry into the transformation of traditional China and Japan to the modern world, including the end of isolation and the impact of imperialism and modernization, an examination of the rise, fall and recovery of Japan, the misfortunes of Chinese republicanism and the Nationalist Party and the triumph of Communism in China.

484 (684) History of Africa 1400 to Present (3) A survey of African history from the 15th century to the present, emphasizing the rise of colonialism, its significance to Africa's underdevelopment and African resistance to colonialism, with special focus on the histories of Algeria, South Africa, Rhodesia (Zimbabwe), Kenya, Angola and Mozambique.

485 The Changing World Order (3) A capstone course in the International Studies major. Designed to help students show their understanding and evaluation of contemporary world issues and reflect on their achievements and goals in the major. Students will have readings, presentations and a major paper.

487-488 Undergraduate Participation in Historical Research and Writing (2, 2) A joint historical project undertaken by student and instructor on a topic of mutual interest which demonstrates and employs the historical method and aims to produce a contribution to the profession. By arrangement only. Prereq: Open to history majors with Junior or Senior standing, minimum history grade of 3.00 and departmental approval.

490 (690) Topics in Non-U.S. History: [Topic Title] (3) Classes taught with an interdisciplinary and/or comparative approach, or allowing for an in-depth study of specialized topics in European or non-Western history. May be repeated for credit (with different topic). Only six hours of undergraduate topics courses (460, 470, 480 or 490) can be counted toward the major or minor. Not regularly offered.
494 (694) Antebellum America, 1815-1850
(3) A study of this remarkable period of American growth and expansion and the conflicts that pushed the nation toward the Civil War, with emphasis on the market and transportation revolutions, reform movements, the evolution of American democracy, territorial acquisition, the U.S.-Mexico War, slavery, sectionalism and presidential administrations, from Madison to Polk, particularly that of Andrew Jackson.

495 (695) The Civil War and Reconstruction, 1850-1877 (3) A critical inquiry into the inflammatory politics of the 1850s, the many causes of the Civil War, the course, conduct and significance of the American Civil War and its aftermath. Special emphasis on the military campaigns, emancipation, activity behind the lines, wartime diplomacy and reconstructing the nation.

496 (696) Recent History of the U.S., 1900-1945 (3) A study of the forces and personalities that shaped American history through Progressivism, WW I, an Age of Excess, Depression and government response and WW II.

497 (697) Recent History of the U.S., 1945 to the Present (3) An assessment of the important activities and changes in American life brought on in large part by WW II and the subsequent competition between the U.S. and the Soviet Union.

498 (698) The Sixties (3) A critical inquiry into a tumultuous period in recent US history. Exploring the rise of the Civil Rights and Black Power Movements, the New Frontier and the Great Society, U.S. foreign policy and Vietnam, the anti-war, women’s and counter-cultural movements and the conservative response to political, cultural and social change.

701 Graduate Independent Study in American History (3) Directed reading or research under supervision of a faculty member to meet the needs of public school teachers of social studies. Significant reading and writing required. Topics, prerequisites and course requirements announced in advance.

702 Graduate Independent Study in European or Asian History (3) Directed reading or research under supervision of a faculty member to meet the needs of public school teachers of social studies.

770 Advanced Topics in History [Selected Topics] (3) A course designed to provide instruction in specialization areas of history useful to public school teachers of social studies. Significant reading and writing required. Topics, prerequisites and course requirements announced in advance. Course may be repeated twice for credit toward the M.S. in Education with a major in teaching history. Not regularly offered.

Honors (HONR)

111 Humanity in a Global Perspective (3) An interdisciplinary study of the relationships among the world’s people and societies. International and cross-cultural relationships are studied from a wide range of academic perspectives. Faculty from a variety of disciplines lecture and lead discussions on a theme chosen for the semester. Active learning, critical thinking, writing and discussion skills are emphasized. Enrollment limited to students in good standing in Honors Programs or by permission of instructor.

112 Humanity in a Social Perspective (3) An interdisciplinary study of the relationship between the individual and social institutions, including the role of cultural diversity. The course focuses on the social and cultural interactions of individuals and groups. Social dynamics are studied from a wide range of academic perspectives. Faculty from a variety of disciplines lecture and lead discussions on a theme chosen for the semester. Active learning, critical thinking, writing and discussion skills are emphasized. Enrollment limited to students in good standing in Honors Programs or by permission of instructor. Prereq: HONR 111 or permission of instructor.

Honors Seminar (HSEM)

108 Honors Seminar (1) Freshmen in the Honors Seminar Program can receive one semester hour of credit for fulfilling the requirements of the Honors Seminar Program. Freshmen in the Honors Seminar
Program participate in a series of seminars with a distinguished campus visitor and attend the public addresses of distinguished visitors throughout the academic year. A research paper is required. Students enroll in this course during the fall semester and complete program requirements during spring semester. An S grade will be assigned for the fall semester and changed to P or F at the end of spring semester when program requirements are completed. Under some circumstances, the course might be completed in one semester with the instructor’s approval. This course is graded on a Pass/Fail basis.

208 Honors Seminar (1) Sophomores in the Honors Seminar Program can receive one semester hour of credit for fulfilling the requirements of the Honors Seminar Program. Sophomores enrolled in this course participate in a series of seminars with a distinguished campus visitor and attend the public addresses of distinguished visitors throughout the academic year. A research paper is required. Students enroll in this course during the fall semester and complete program requirements during spring semester. An S grade will be assigned for the fall semester and changed to P or F at the end of spring semester when program requirements are completed. Under some circumstances, the course might be completed in one semester with the instructor’s approval. This course is graded on a Pass/Fail basis.

308 Honors Seminar (1) Juniors in the Honors Seminar Program can receive one semester hour of credit for fulfilling the requirements of the Honors Seminar Program. Juniors enrolled in this course participate by attending public addresses of distinguished visitors throughout the academic year. Submission of a course paper is also required. Students enroll in this course during the fall semester and complete program requirements during spring semester. An S grade will be assigned for the fall semester and changed to P or F at the end of spring semester when program requirements are completed. Under some circumstances, the course might be completed in one semester with the instructor’s approval. This course is graded on a Pass/Fail basis.

408 Honors Seminar (1) Seniors in the Honors Seminar Program can receive one semester hour of credit for fulfilling the requirements of the Honors Seminar Program. Seniors enrolled in this course participate by attending public addresses of distinguished visitors throughout the academic year. Submission of a course paper is also required. Students enroll in this course during the fall semester and complete program requirements during spring semester. An S grade will be assigned for the fall semester and changed to P or F at the end of spring semester when program requirements are completed. Under some circumstances, the course might be completed in one semester with the instructor’s approval. This course is graded on a Pass/Fail basis.

S (Satisfactory) Grade—For an explanation of this grade, see Grades section of university catalog.

Human Learning (HLRN)

311 Technology Integration (2) Overview of methods for integrating technology into the K-12 curriculum. Emphasis is on the application of technology-based strategies to support K-12 student learning and classroom management. (One hour lab required.)

325 Educational Psychology (3) An overview of the application of psychology to the teaching/learning process. The creation of an effective learning environment is emphasized through the study of the teaching process, human development, learner differences, learning theory and motivation.

Human Performance (HPER)

206 Tumbling, Fitness and Self-Testing Activities (3) Emphasis on the safe integration of basic tumbling, fitness and self-testing activities into the elementary and secondary school curriculum. Requires performance proficiencies in selected skills.

207 Techniques in Strength and Conditioning (3) Emphasis on health-related fitness assessments, weight training techniques, plyometrics, aerobic training, nutrition, ergogenic aids and flexibility.
209 Professional Orientation (3) Overviews the physical education and health education professions emphasizing the individual’s role as a professional including behavior, values and career opportunities. Addresses attitudes, knowledge and skills as defined by the College of Education and Behavioral Sciences Conceptual Framework including entry level portfolio development.

302-303 Fitness and Health Promotion Practicum (2, 2) An introduction to a variety of career opportunities, developing a professional résumé, professional philosophy, professional goals and objectives and a professional portfolio. Includes a 45 hour supervised study and experience with a cooperating agency. Application must be approved and liability insurance purchased before student may enroll. Prereq: Student must be a Department of Health and Human Performance major.

304 Adapted Physical Education (3) Adaptive Physical Education is a course designed to modify activities and programs in the area of health and physical education for special populations.

315 Historical and Philosophical Perspectives of Health, Physical Education and Sport (3) A review of the heritage of health, physical education and sport and quest for understanding the philosophical perspectives that have evolved throughout history.

350 Motor Behavior (3) An examination of the sub-areas of motor development, motor control and motor learning. Emphasis is placed on the practical application of the principles and theories of these sub-areas by physical educators.

360 Firearm and Boating Safety (3) Various techniques in firearm and boating safety instruction. The participant will receive student certification in the areas of hunting and boating safety through the Tennessee Wildlife Resource Agency. Teaching instructor rating will also be available.

415 Professional Leadership (3) Emphasizes the skills and competencies required to succeed in sport and health-related professions. Coverage includes entry level career skills and opportunities, portfolio refinement, fundamentals of leadership and legal and sociological issues.

432 (632) Sport and Exercise Psychology (3) The emphasis of this course will be on the current issues and challenges facing active populations and their individual differences and behaviors. Intervention techniques and social-environment will be discussed as to their effects on sport behavior and performance.

435 Nutrition for Health, Fitness and Sport (3) Examines the role of nutrition for the physically active individual as it relates to health-related fitness and athletic performance. Topics include the human energy system, macro and micronutrients, weight management, hydration and nutritional supplements. Prereq: NUTR 100; EXSC 430 or any human anatomy and/or physiology with a lab, or instructor’s approval.

440 (640) Evaluation in Human Performance (3) Overview of the procedures and instrumentation required in the administration of psychomotor skills testing and evaluation. Emphasis is on proper selection and administration of tests, appropriate evaluation of test results using basic statistical procedures (e.g., random sampling, correlation, t-tests, ANOVA).

491 Internship (12) One semester work experience with a cooperating agency. Application must be approved and liability insurance purchased before student may enroll. Prereq: Must have all core coursework per discipline completed.

740 Sport and Exercise Nutrition (3) In-depth look at nutrition as the foundation for physical performance. The role of various nutrients in providing energy and regulating physiological processes related to health, fitness and athletic performance will be studied. Critical evaluation of nutritional supplements as performance aids along with other related issues such as eating disorders will also be included. Prereq: NUTR 100 or above; Exercise Physiology, or instructor’s approval.

750 Workshop on Selected Topics [Title of Topic] (3) Workshop on selected topics. May be repeated with variation in topic but no more than six hours of workshop credit may be applied to a graduate degree in Education. Prereq: Instructor’s approval.
Information Systems

(INFS)

151 Fundamentals of Business (3) An introductory survey of the basic functional areas of business designed to acquaint students with the concepts and principles which underlie administrative practices in contemporary society. Not available for junior or senior Business majors.

211 Introductory Spreadsheet Applications (1) Hands-on experience in spreadsheet applications at the introductory level. Pass/Fail option.

212 Intermediate Spreadsheet Applications (1) Hands-on experience in spreadsheet applications at the intermediate level. Pass/Fail option. Prereq: INFS 211 or CSCI 201.

213 Advanced Spreadsheet Applications (1) Hands-on experience in spreadsheet applications at the advanced level. Pass/Fail option. Prereq: INFS 212.

221 Introductory Database Applications (1) Hands-on experience in database applications at the introductory level. Pass/Fail option.

222 Intermediate Database Applications (1) Hands-on experience in database applications at the intermediate level. Pass/Fail option. Prereq: INFS 221 or CSCI 201.

223 Advanced Database Applications (1) Hands-on experience in database applications at the advanced level. Pass/Fail option. Prereq: INFS 222.

231 Introductory Word Processing (1) Hands-on experience in word processing at the introductory level. Pass/Fail option.

232 Intermediate Word Processing (1) Hands-on experience in word processing at the intermediate level. Pass/Fail option. Prereq: INFS 231 or CSCI 201.

233 Advanced Word Processing (1) Hands-on experience in word processing at the advanced level. Pass/Fail option. Prereq: INFS 232.

241 Current Productivity Tools (1) Hands-on experience in current computer productivity tools at the introductory level. Pass/Fail option. May be repeated for credit.

251 Office Procedures (3) Review and practical application of modern office procedures. Prereq: INFS 211 and INFS 231 or CSCI 201.

290 Topics in Information Systems [Topic title] (1-3) Lectures and/or special projects related to specialized topics in information systems. Course may be repeated for a maximum of six (6) credit hours. May be offered on Pass/Fail basis. Prereq: Departmental approval required.

310 Management Information Systems (3) A comprehensive overview of the use of management information systems and their applications to all functional areas of business including technical foundations and implementation of management and support information systems. Prereq: Junior standing.

331 Professional Word Processing (3) Advanced word processing application skills. Emphasis on strategies for selection of appropriate tools for advanced word processing techniques. A simulation project is included. Prereq: INFS 233 or instructor’s approval.

351 Business Communications (3) Communication of business information through oral presentations and written letters and reports, including research papers/formal reports.

361 Network Administration (3) Introduction to concepts, terminology and application of network administration. Topics include network architectures, security, services and administration. Prereq: INFS 310.

461 End-user Information Systems (3) A survey of the major technologies used to support end users. Emphasis on technology selection and implementation, trends and issues relative to information system analysis and design, productivity measures, information economics and change management.

462 Office Management (3) Theory of planning, organizing and directing in the office environment. Prereq: MGT 300.
480 Internship in Management Information Systems (1-9) Supervised work experience in business establishments, institutions, or other organizations matched to the student's curriculum. May be repeated for up to a total of nine hours internship credit. A maximum of six hours may be used to fulfill degree requirements. Prereq: Departmental approval is required; at least junior standing.

481 Current Issues in Office Information Systems (3) Seminar in current issues in the office information systems environment. Students are required to write research reports and give oral presentations. Prereq: INF 310.

490 Advanced Topics in Information Systems [Topic title] (1-3) Lectures and/or special projects related to specialized advanced topics in information systems. Course may be repeated for a maximum of six (6) hours credit. May be offered on a Pass/Fail basis. Prereq: Departmental approval is required.

491 Current Issues in Management Information Systems (3) Seminar in current issues in management information systems. Students are required to research topics, write reports and give technology-assisted oral presentations. Prereq: CSCI 351 or INF 310.

761 Information Systems (3) An advanced seminar in information systems and their applications to all functional areas of business.

Interdisciplinary Studies (IDST)

110-120 Introduction to Leadership (2, 2) Academic and experiential knowledge of leadership theory and practice to guide the student in developing his or her leadership skills, understanding and analyzing leadership issues and appreciating the responsibilities for serving as a leader of a group or organization. Requirements include oral and written work as well as demonstration of skill development. Graded on Pass/Fail basis.

150 Introduction to the Canadian People and Their Culture (1-3) An overview of Canada today, with emphasis on the life-styles, customs and values of the Canadian people and their attitudes towards the United States. This course is designed as an introduction to Canadian Studies and students are encouraged to take it in conjunction with other approved courses in the Canadian Studies program. Students who complete additional assignments in French (readings and written critiques) will receive two or three credits for this course.

201 Introduction to Women's Studies (3) Surveys the study of women in society. The primary goal is to explore how gender shapes our views and understandings. A further goal is to explain how class, race, ethnicity and age shape the female experience historically and across cultures. The relationship between cultural definitions of feminine behavior and the reality of women’s lives, roles in work, the family, the arts, politics and the sciences is examined. (Same as WMST 201)

250 Foundations in Canadian Studies (3) An in-depth study of Canada as it has developed on the North-American continent from pre-colonial times to the present. Equal emphasis will be placed on Canadian geography, history, politics, literature and culture. Special attention will be given to the role played by Quebec in the formation of Canada and in Canadian society today.

450 (650) Energy Studies (3) A multidisciplinary course presenting the realities of diminishing fossil fuels, environmental consideration associated with energy resources and emerging sources of energy. Lectures and field excursions. For additional information about these courses and the frequency with which they are offered, contact Department of Geology, Geography, and Physics.

711-712 Environmental Studies (2, 2) An interdisciplinary study of a natural ecosystem involving biology, chemistry, geology, mathematics and physics. The course, a combination of lectures, lab and field work, is taught during the summer only. For additional information about these courses and the frequency with which they are offered, contact the Chair of the Department of Biological Sciences. Prereq: K-12 science and/or mathematics teacher; and consent of instructor(s).
**Interior Design (INTD)**

**100 Design Selection** (3) Study of interior design profession, design and color theory, design process and space planning techniques using appropriate technology and resources. Overview of aesthetic and functional selection of interior systems and design components with attention to human needs in the built environment.

**210 Interior Design Studio** (3) A basic interior drafting course emphasizing symbols, tools and techniques necessary for drawing interior house plans. Color coordination within the interior environment. One one-hour lecture and two two-hour labs. *Prereq: INTD 100 or instructor’s approval.*

**302 Historic Furniture Design** (3) Tracing the development of furniture and interiors from ancient times to the present including recent adaptations and contemporary developments.

**303 Human Needs in Housing** (3) The social, psychological, economic and technological factors involved in fulfilling environmental needs of individuals and families.

**340 Interior Design Applications** (3) Studio problems in Interior Design. Emphasis placed on the development and application of skills for sketching and drafting the interior environment. Study of perspective techniques as means of visual communication. One one-hour lecture and two two-hour labs. *Prereq: INTD 210, ART 221 or instructor’s approval.*

**410 Lighting** (1) A study of the theories of color and principles of lighting including residential and commercial applications. Lectures and activities provide practical application of the knowledge learned to problem-solving solutions.

**411 Materials and Finishes** (1) Technical knowledge and design attributes of materials and finishes for interior design. To include lectures, field trips and practical applications. Students will gain the understanding of the appropriate materials and finishes, as well as code requirements for commercial interiors.

**412 Professional Procedures** (1) A study of the business principles and practices for the interior design profession. To cover ethics, goal setting, legal issues, promoting practice, contract writing and presentations specific to the profession.

**442 Residential Interior Design** (3) Techniques for rendering presentation boards. Continued development of drafting applications and material selection relative to planning and furnishing the residential environment. One one-hour lecture and two two-hour labs. *Prereq: INTD 340 or instructor’s approval.*

**443 Commercial Interior Space Planning** (4) A continuation of Residential Interior Design using various techniques for rendering commercial interior spatial designs. Critical assessment of students’ collected creative works and development of individualized portfolios. Two three-hour labs and one independent studio lab. *Prereq: INTD 340 or instructor’s approval.*

**450 Computer Applications in Interior Design** (3) Overview of computer applications in the field of interior design; basic terminologies associated with microcomputer hardware and software; development of projects using the computer as a basis for graphic communication. One one-hour lecture and two two-hour labs. *Prereq: INTD 340 or instructor’s approval.*

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**Japanese (JAPN)**

**111 Elementary Japanese** (4) An introductory course emphasizing listening, speaking, reading and writing. May be used to remove a language deficiency or for students with no prior experience in the language. Three one-hour lectures and two one-hour labs.

**122 Elementary Japanese** (4) An introductory course emphasizing listening, speaking, reading and writing. Three one-hour lectures and two one-hour labs. *Prereq: JAPN 111 or the equivalent as determined by the department.*

**222 Intermediate Japanese** (4) Grammar review, reading, writing and conversation. Three one-hour lectures and two one-hour labs. *Prereq: JAPN 122 or equivalent as determined by the department.*
250 Japan Today: The People and Culture of Japan (3) An interdisciplinary study of Japan today, with emphasis on the life-styles, customs, mentality and overall culture of the Japanese people. Discussion of current trends in politics, education, media, religion, literature and the arts (including popular culture), especially as they illustrate important cultural values and attitudes. Consideration of the attitudes of Americans towards the Japanese people and vice versa. Taught in English.

315 Intensive Reading in Japanese (3) Emphasizes receptive skills. Readings from formal to informal written texts. Selection of contemporary written materials, including literary works, poetry and original texts from magazines, as well as newspapers, instructional business materials and technical explanations.

341 Advanced Conversation (3) Emphasizes conversational skills. Oral practice to extend range of topics, vocabulary, fluency and conversational strategies. Study of the phonetic system of the Japanese language and exercises to improve pronunciation. Grammar appropriate for oral Japanese. Discussions utilizing reading and electronic media such as videos and the Internet. Heritage speakers and those with near-native abilities in Japanese are not eligible to take this course. Prereq: JAPN 222 or instructor’s approval.

342 Advanced Composition (3) Emphasizes composition skills. Written practice to extend range of topics, vocabulary, fluency and compositional strategies. Grammar and stylistics appropriate for written Japanese. Practice writing expository and creative prose, translations as well as use of Internet discussion lists. Emphasis on the customs, mentality and contemporary culture of Japan. Prereq: JAPN 222 or instructor’s approval.

360 Studies Abroad (3) In-residence study of the literature, language, or civilization of the area visited. Relevant field trips. Must be approved in advance by the Chair of the Department of Modern Foreign Languages. Prereq: JAPN 222 or department approval.

370 Travel Study [Topic Title] (1-3) a combination of travel and study experiences in the U.S. or abroad designed to enrich students’ knowledge of the target foreign language and culture. May be taught as an organized study tour under faculty supervision or as an independent travel and study project with prior department approval. Topics, prerequisites and course requirements announced in advance. Students may repeat course with change of topic for a maximum of six hours credit. Chair of the Department of Modern Foreign Languages approval must be obtained for travel-study courses to count toward minor, major, or Certification of Proficiency. Not regularly offered.

Leadership (LDSP)

321 Leadership Through Film (3) Provides students opportunities to combine the theory and practice of leadership through film. Course goals focus on issues of charismatic leadership, social learning theory, transactional and transformational leadership, types of leaders, power bases, misuse of authority, motivation, norms and status, diversity, American individualism, intrinsic and extrinsic motivation, creativity, ethical leadership, overcoming resistance to change, systems concepts and interdependencies, communication, managing paradox and the meaning of work.

322 Leadership: Theory, Innovation and Policy (3) This course provides a practical introduction to leadership. Special emphasis and understanding will be placed on the nature of leadership, understanding the theories behind their current and future political and economic environments, individualism vs. narcissism, researching the will and will power, free will and determinism, action and consequences, enthusiasm, honesty, liberty and responsibility, self-presentation and attitude, interpersonal relationships, creativity, and technology and advancement. Students will culminate this knowledge in regard to leading within their social, political and economic environment. Development of unique personal leadership initiatives within their discipline through research and design of a strategic leadership plan of action. Prereq: LDSP 321 or consent of instructor.

323 Leadership Advancement, Action and Global Issues (3) This course provides structured class dialogue where students discuss concepts related to leadership, action and current global events.
Course objectives include an ability to envision and implement advancement for the greater good, while using an informed perspective within context; as well as the application of leadership and organizational theories through real-world experience. Prereq: LDSP 321, LDSP 322, or consent of instructor.

**Library Service (LIBS)**

414 (614) Librarianship and the Administration of the School Library and Media Center (2) An introduction to the history and rules of libraries, media and information centers; consideration of the nature of the discipline of library and information science; current professional issues. Organization, services, functions and administration of the school media center.

425 (625) Technical Services I (2) Technical services, principles and techniques for operating a school library. Includes acquisitions, basic manual and computer cataloging using the Dewey decimal system, structures and use of library catalogs and basic subject organization.

426 (626) Technical Services II (2) Introduction to cataloging systems other than the Dewey decimal system, including the Library of Congress system, development of library records, vertical file, computer and manual cataloging of non-print materials, the development of policy statements, collection evaluation and weeding.

433 (633) Information Resources and Services (2) Nature of information resources and reference services; study of all types of these materials in specific fields for schools and community use; content, evaluation, organization and utilization.


452 (652) Books and Non-Print Materials for Adolescents and Adults (3) A survey and examination of print and non-print materials suitable for young adults in grades 5-12 with an emphasis on developing these materials for practical use in the classroom for leisure time or classroom activities and for adults’ recreational and informational activities. Criteria for selecting books, magazines, recordings, films, videos and computer software. Strategies for encouraging literacy and principles of materials selection.

475 (675) Introduction to Educational Media: Materials, Techniques and Preparation (3) Designed to introduce prospective teachers to the problems of educational communication, the materials for use and the significant characteristics of these materials and competencies necessary for effective use of the media and technology. Special emphasis given to preparation of media materials.


**Management (MGT)**

300 Management and Behavior (3) This is a study of managerial functions and decision-making and how these affect human behavior within organizations. This course also includes consideration of organizational structure and organizational dynamics relative to the environments.

301 Organization and Management (3) Management processes and functions in manufacturing and service organizations. Analysis of organization structure, management practices of planning and control. Motivation and leadership practices. Introduction to techniques and tools of decision processes. Students are required to write case reports and give oral presentations. Prereq: ECON 201 or 202; ACCT 201 or 300.

303 Organizational Behavior and Theory (3) An advanced study of analyzing, directing and changing organizational structure and organizational dynamics relative to the environment. Prereq: MGT 301.
304 Introduction to Entrepreneurship (3)
This course provides the student with fundamentals of entrepreneurship and covers the entrepreneurial process from conception to harvest of the new venture. The student will be involved in writing a business plan. It concentrates on identifying the attributes of entrepreneurs, the process of searching for opportunities, evaluating the viability of a new venture, financing, starting and operating the new venture. Prereq: MGT 300 or 301 or instructor's permission.

307 Small and Family Operated Businesses (3)
Course is designed for students interested in the issues, problems and unique concerns of family business involvement and management. Cases, videos, readings and guest lectures focus on critical aspects of family business management. Course is organized around the following themes: understanding the family business systems theory, culture and stages of evolution; individual development and career planning; management of family structure, conflicts and relationships; and organizational issues including succession and estate planning, strategic planning and formalizing the firm. Prereq: MGT 304.

310 Operations Management (3)
Management of business transformation processes. A survey of the basic concepts, principles and practices involved in the design, implementation, operation and control of business processes (operations) in contemporary business organizations. Emphasis is placed on the integration of the operation function with other disciplines to foster achievement of strategic and tactical goals in both manufacturing and service organizations. Topical coverage includes operations strategy, product/service design, process design, contemporary quality management, forecasting, capacity planning, facility location and layout, work design and scheduling, production planning and control with a broad emphasis on goal-driven process and productivity management and quality management. Prereq: MATH 210 and MGT 301, or ENGR 210. (Same as INEG 310)

312 Introduction to Management Science (3)
Introduction to quantitative methods used in business decision making. Topical coverage includes mathematical programming, dynamic and network programming, multi-objective decision modeling, decision theory, simulation, inventory models and waiting lines. Computer software will be used to analyze application problems in business and economics. Prereq: CSCI 201 and MGT 310, or INEG 310. (Same as INEG 312)

320 Data Analysis for Managerial Decision Making (3)
Managerial decision making is emphasized based on the detection and evaluation of patterns in multiple factor databases related to particular managerial problems. Given the nature of the data, appropriate hypothesis tests and statistical tests of hypotheses will be applied including regression and correlation analysis, analysis of variance, crosstabs and multivariate regression. Use of standard computer programs to analyze the data will be incorporated. Prereq: MATH 210 or equivalent.

330 Process Control and Improvement (3)
A methodology for selecting, defining, measuring, stabilizing, evaluating and improving both production and service processes is presented. A variety of analytical methods are utilized in the sequence of instruction including the seven simple tools of quality, metrology, SPC, process capability analysis and experimental design. Prereq: Junior standing. (Same as INEG 330)

340 Labor Relations Management (3)
An analysis of the relationship between management of private and public sector enterprises and labor organizations. The examination of the development, government and functions of labor unions, the legal environment of labor relations, union organizing campaigns and the collective bargaining process. Prereq: ECON 201-202.

350 Human Resource Management (3)
Personnel principles, functions and practices, relating to managing human resources in organizations, the development of personnel practices and currently accepted practices in personnel management. Prereq: MGT 300 or 301 or SPMG 305. (Same as INEG 330)

412 Applied Operations Management (3)
Design, operation, control and continuous improvement of lean operations processes through methods analysis utilizing TOC, JIT and TQM principles. Emphasis is on the design, implementation and operation of integrated lean processes covering such functions as aggregate planning, master scheduling,
inventory planning and control, material requirements planning and control, capacity requirements planning and production and process layout and work design and flow. A project is required. Prereq: MGT 310 or INEG 310. (Same as INEG 412)

430 Quality Management in Business (3) A study of the continuous improvement process utilized in the management of quality in both production and service organizations. Emphasis will be placed on the involvement of all in the organization in planning, documenting, implementing quality assurance procedures and verifying that goods/services meet specified requirements while satisfying customers. Issues on Quality System Certification processes to meet industry and international standards will also be addressed. Prereq: MGT 310.


450 Compensation Management (3) A study of the design and administration of compensation systems. Examination of job analysis, job evaluation, compensation research, pay structure design and employee benefits management. Prereq: MGT 350.

461 International Management (3) A study of the rapidly changing global environment and the ability of organizations to adapt to these changes. This study of changes includes developing countries, legal and political issues, ethical values and social responsibility, strategic and operational decisions and the role of culture in motivating and building an effective workforce. Students will complete projects and presentations that will demonstrate understanding and application of concepts and theories.

470 Training and Development (3) Analysis of a systematic process of changing the behavior, knowledge and motivation of present employees to improve the match between employee characteristics and employment requirements. Prereq: MGT 350.

471-479 Topics in Management (3) Selected topics in management offered on an occasional basis for qualified students. Admission by permission of instructor only.

480 Internship in Management (3, 6, 9) Supervised work experience in business establishments, institutions, or other organizations matched to the student’s curriculum. Prereq: Departmental approval required; at least junior standing. May be repeated for up to a total of nine hours credit.

481-482 Independent Study in Management (3, 3) Special research projects undertaken individually under the supervision of the faculty. Maximum credit available for independent study courses is six hours. Prereq: Senior standing.

490 Business Policy (4) A capstone course focusing on policy, strategy and the integration of all business functional areas, including analysis of the implications and relevance of social, ethical, environmental, competitive and international considerations for top-level organizational decision making. Students are required to write case reports and give oral presentations. Additionally, professional preparation including; résumé building, interviewing skills and ethics will be included. This course may be taken only by students majoring in business disciplines. Students must take this course during their last semester of study. Prereq: ACCT 201, 202; BLAW 201 or 301; ECON 201, 202; FIN 301; INFS 310 or ACCT 361; INFS 310, 351; MGT 300, 310; MKTG 301.

491 Current Issues in Human Resource Management (3) Seminar in current issues in the human resource environment. Students are required to write reports, develop solutions for contemporary human resource issues and give oral presentations. Prereq: Departmental approval required; MGT 350.

710 Organizational Theory and Design (3-4) This course will address the theory of how organizations are structured. The course explores the behavioral side of organizations at both the macro and micro levels. The evolving body of empirical, literary, philosophical and case/experiential knowledge will be discussed to enhance appreciation for the role of human action in the design and function of organizations.
720 Statistical Tools of Quantitative Analysis (3) Designed to give students the statistical skills necessary for advanced work in the functional areas of business administration.

730 Operations Management (3) Introduction to major concepts, technologies and decision processes used by service and manufacturing firms with an emphasis on value creation through process identification, analysis and improvement. Mathematical techniques and computer-based analysis of integrated production and distribution of products and services will be stressed. Topics covered include: mathematical programming, simulation, operations strategy, operations decision making, forecasting, supply chain management, product/process design and selection, quality management, capacity planning, location/layout analysis, work system design, inventory systems, queuing theory and the lean enterprise. Prereq: ACCT 201 or ACCT 300.

740 Management of Innovation and Technology (3) Contemporary issues in development, introduction, justification, acquisition and maintenance of creativity, innovation and technology in small and large organizations.

750 Human Resource Management (3) An investigation of practices and problems associated with the management of people in contemporary organizations. Consideration is given to both individual and collective relationship situations. A case study approach is extensively utilized, including coverage of Human Resource Management Information Systems and union-management relations.

790 Strategic Management and Business Policy (3) An advanced case study, integrating marketing, management, economics, finance and accounting of selected problems encountered in the management of typical organizations engaged in the production of goods and services. Problem analysis and decision-making skills are emphasized in the context of the existing international environment. M.B.A. students must take this course during their last semester. Approval from the Graduate Coordinator is required before registering for this course. This course may not be taken for credit by M.Ac. students. Prereq: Students must have a 3.00 graduate cumulative GPA with no I grades while enrolled in MGT 790.

Marketing (MKTG)

105 Introduction to Marketing (1) A course designed to acquaint students with the role of marketing in society. Brief introduction to activities involved in product planning, distribution, promotion and pricing. Students may not take this course for credit after Principles of Marketing (MKTG 301).

301 Principles of Marketing (3) Introduction to the complexity of the modern marketing system—why it is essential and how it performs. Identification and examination of business activities involved in the process of planning and executing the conception, pricing, promotion and distribution of ideas, goods and services to create exchanges that satisfy individual and organization objectives. Prereq: Junior standing.

302 Personal Selling (3) Theories, concepts and practices essential for successful application of the personal selling function. Attention to sales-force management and sales-presentation techniques. Prereq: Junior standing.

310 Retailing (3) A study of the fundamentals of successful retail strategic management and merchandising. Topics addressed will include a consideration of the current retail environment, retail performance evaluation, store location decisions, merchandise management, store management and operations, store layout and visual merchandising. Prereq: MKTG 301 and either ACCT 201 or 300.

320 Consumer Behavior (3) An analysis of consumer buying behavior, including attitudes, perception, learning, involvement, personality, culture and subculture, reference group and family influence and group communication. These are studied in the context of marketing decision-making, particularly decisions about market segmentation, product positioning, advertising and research. Prereq: MKTG 301.

330 Advertising and Promotion Management (3) Study of the theory and practice of advertising and other promotion mix elements as they relate to the development of an integrated marketing communication program. Application of advertising theory to current advertisements. Emphasis on the use of advertising and the promotion mix in developing
marketing strategy from a managerial perspective. Prereq MKTG 301.

340 Logistics Supply Chain Management (3) An introduction to logistics management. A study of the decisions involved in the flow and storage of goods, services and information from supplier to the end user. Topics include purchasing and materials management, transportation decisions, quality, customer satisfaction and the nature of relationships between firms within the channel of distribution. Prereq: MKTG 301.

350 Service Marketing (3) A study of marketing concepts and the extension of the marketing management process beyond the traditional role in the physical products area. To develop an understanding of the creative translation required in the supplemental and core marketing mix for services. Emphasis on the development of marketing strategy and analysis of the distinctive aspects of service marketing, including the role of internal relationships. Prereq: MKTG 301.

360 Marketing Research (3) A study of marketing research as an aid to marketing decision making. Emphasis will be placed on problem defining, data collection and analysis of data applied to the solution of marketing problems. Students are required to develop and present written marketing research reports and make oral presentations. Prereq: Junior standing.

371 Forensic Marketing (1) The study of the marketing failures which is beyond the traditional method of studying business or product success. The flawed development of marketing strategy which resulted in mistakes and failures will be analyzed. Emphasis on marketing decision making in a changing environment. A lecture/case analysis/seminar format will be used. Prereq: MKTG 301.

372 Sports Marketing I (1) Addresses the application of strategic marketing within the sports industry. Topics include an examination of internal and external forces that impact sports marketing strategy development, market research, sports consumers and target market selection decisions. Prereq: MKTG 105 and SPMG 305; or MKTG 301.

373 Sports Marketing II (1) Addresses the application of the traditional “four Ps” of marketing (Product, Place, Promotion, Price) to sports marketing strategy development. Prereq: MKTG 105 and SPMG 305; or MKTG 301.

374 Marketing and Society (1) This course examines the interaction between marketing and society. The scope of marketing as a manager’s tool for achieving business goals in enlarged and placed in the context of the goals of a society. The reactions of society to marketing’s role in the economy are introduced, such as consumer responses or public policies. The roles of marketing in diffusing social goods as well as the de-marketing of social “bads” are considered. Prereq: MKTG 301 or consent of instructor.

375 Travel and Tourism Marketing (1) An examination of marketing applications within the travel and tourism industry. Topics include tourist market segmentation, intermediaries and distribution channels within travel and tourism, the tourism “product” (transportation, accommodations, attractions and entertainment, destinations) and service quality. Prereq: MKTG 301.

376 Executive in Residence Seminar (2) This course features interaction with business practitioners. Students will participate in small group discussions and hear presentations on current business topics. Prereq: MKTG 301; MGT 301 or MGT 300; FIN 301. Course may be repeated once for credit.

377 Events Planning (1) Principles surrounding events planning within organizations are discussed. The course covers event definition, theme selection, site selection and event management, as well as marketing and event promotions.

410 International Marketing (3) Emphasis on the problems and decisions facing managers of international marketing across national boundaries, the environment in which international marketing takes place and ways of integrating and coordinating marketing programs in many diverse markets. Prereq: MKTG 301.
E-Commerce Marketing (3) This course is a study of the foundations of doing business in a networked economy. Electronic commerce (E-commerce) can be defined as technology-mediated exchanges between parties as well as the electronically based intra-or inter-organizational activities that facilitate such exchanges. Focus is on what a future practitioner needs to know about Internet infrastructure, online consumer behavior, strategy formulation and implementation, technology concepts and public policy issues in order to make effective business decisions. Emphasis is on strategy and marketing issues in a technology-mediated environment, which are presented and compared with the “offline” economy. Prereq: Junior standing.

Marketing, Business and Environmental Ethics (3) To develop the ability to recognize ethical issues in business and the interrelationship of business ethics and social responsibility. To present guidelines and a framework which is designed to identify and analyze ethical issues in organizations. To CRITICALLY assess the different ethical theories used in business decisions and to consider individual diversity of values. To examine the consequences of individual business ethical situations through VCR and case analysis. Prereq: MKTG 301.

Business to Business Marketing (3) Exploration of the environment that businesses operate within when marketing to other businesses or distribution channel members. Includes an emphasis on organizational purchasing behavior, the global nature of the business marketplace and the processes involved in understanding, creating and delivering value for business customers. Dynamics of the marketing mix, strategy development and buyer-seller relationships are studied within this environment. Application oriented through the use of case analysis and/or computer simulation. Emphasis on group work and communication skills. Prereq: MKTG 301.

Direct Marketing Management (3) An examination of the concepts, strategies and applications involved in direct marketing, including direct mail, direct response advertising, telemarketing, catalogs, the Internet and infomercials. Measurability, accountability, list and database management and the integration of direct marketing programs into the promotion mix and the marketing mix with an emphasis on marketing strategy. Prereq: MKTG 301.

Marketing Management (3) Application of analytical skills and strategic perspective in the development and implementation of marketing strategy and plans in a competitive environment using a computer simulation based on group competition. Emphasis on marketing concepts, competitive decision making, the development of marketing strategy and plans and group interactions in a changing environment. Prereq: MKTG 301, MGT 301, ACCT 201, and senior standing.

Current Topics in Marketing (3) Selected topics in marketing offered on an occasional basis. Prereq: MKTG 301.

Internship in Marketing (1-9) Supervised work experience in business establishments, institutions, or other organizations matched to the student’s curriculum. Prereq: Approval of the department chair and marketing faculty.

Independent Study in Marketing (3, 3) Special research projects undertaken individually under the supervision of the faculty. Maximum credit available for independent study courses is six hours. Prereq: Senior standing.

Marketing Strategy (3-4) This course is a seminar in history of marketing thought and current perspectives with managerial application. Topics will include marketing theory and philosophy, the creation of value through integrating the conception, production, distribution and exchange of goods, services and ideas, marketing planning, market identification and environments, product strategy, price strategy, channels strategy, promotional strategy and marketing assessment and control.

Services Marketing Management (3) A study of the marketing management process designed to identify both commonalities and distinctive aspects of service and physical product marketing as they affect service marketing strategy development and implementation. Attention is given to the creative balance of all elements of the core and supplemental marketing mix and marketing concepts related to successful marketing of services, including health care and social causes. Extensive case studies and
presentations are utilized to illustrate appropriate decision making skills and strategies in a seminar environment.

730 Channel Strategy and Business Market Management (3) An application-oriented study of alternative marketing strategies available to manufacturers. Emphasis on the relationships between channel members, from supplier to end user. Studies will include an investigation of the impact of customer analysis, competitor analysis and marketing mix components on decisions related to channel development and management, channel strategy and organizational marketing. Extensive use of computer simulation and readings. Prereq: MKTG 301 or MKTG 710.

Mathematics (MATH)

070 Developmental Algebra I (3) (TBR: DSPM 0800) Linear equations and inequalities. Exponents, roots and radicals. Polynomials. Rational expressions. May not be counted toward any degree requirements, but may be substituted for one unit of high school Algebra I.

080 Developmental Algebra II (3) (TBR: DSPM 0850) Quadratic equations and inequalities. Graphing and straight lines. Systems of linear equations. Inverse, exponential and logarithmic functions. May not be counted toward any degree requirements, but may be substituted for one unit of high school Algebra II. Prereq: Appropriate mathematics placement OR completion of MATH 070.

090 Developmental Geometry (3) (TBR: MATH 0990) Selected topics from unified geometry. May not be counted toward any degree requirements, but may be substituted for one unit of high school Unified Geometry. Prereq: Algebra I or MATH 070.

130 The Nature of Mathematics (3) Selected topics from algebra, geometry, number theory, logic, probability, statistics, management science, finance, computing and numerical techniques. Modeling and problem solving techniques will be illustrated to give students insight into what mathematics is, what mathematics attempts to accomplish and how mathematics is used to solve real life problems. May not be used to satisfy degree requirements for the B.S. degree. May not be taken for credit by any student who has successfully completed a higher-numbered mathematics course. Prereq: One unit of high school geometry and either two units of high school algebra and a satisfactory score on the placement test or MATH 080.

140 College Algebra and Elementary Functions (3) (TBR: MATH 1710) Functions (e.g., polynomial, exponential and logarithmic). Zeros of polynomials. Solutions of systems of equations and inequalities. Triangle trigonometry. Selected topics from algebra such as matrices and determinants and arithmetic and geometric sequences. Prereq: Two units of high school algebra, and appropriate mathematics placement OR completion of MATH 080.

160 Calculus for Business and Life Sciences (3) (TBR: MATH 1830) Average and instantaneous rates. The derivative and its application to curve tracing and max-min theory. Antiderivative, area under a curve, fundamental theorem. Natural logarithm and its application to interest, growth and decay. Prereq: MATH 140 or 185 or appropriate mathematics placement.

185 Precalculus (5) Algebraic properties of real numbers. Solutions of equations and inequalities. Logarithmic and exponential equations. Survey of conics. Trigonometric functions, identities, graphs and equations. Trigonometric applications. Prereq: Two units of high school algebra, one unit of high school geometry, and appropriate mathematics placement.

191-192 Principles of Mathematics (3, 3) (TBR: MATH 1410-1420) Algorithms for four basic operations, systems of whole numbers and integers. Relations and functions. Greatest common factor and least common multiple. Fractions, decimals, percent, ratio and proportion. Statistics and probability. Metric system, measurement, area, volume, informal plane and solid geometry. These are manipulative and activity based courses. Courses must be taken in sequence. Prereq: MATH 140 or 185 or 251.

210 Elementary Statistics and Probability (3) (TBR: MATH 1530) Descriptive measures, elementary probability, sampling, random variables. Discrete probability distributions, normal probability distributions and introduction to inference theory. Prereq: MATH 140, 185, or 251 or appropriate mathematics placement.
251-252 Calculus I, II (4, 4) (TBR: MATH 1910-1920) Limits and continuity. Derivatives and integrals of polynomial, exponential, logarithmic, trigonometric and hyperbolic functions. Techniques of integration, conics, parametric and polar equations, indeterminate forms and improper integrals. Infinite series, including Taylor’s series. Must be taken in sequence. Prereq: Two units of high school algebra, one unit high school geometry, 1/2 unit high school trigonometry, and appropriate mathematics placement OR completion of MATH 185. A grade of C or better in MATH 251 is required to enroll in MATH 252.

291 Special Topics in Mathematics (1-3) Lectures and/or lab work relating to specialized topics in mathematics. Course may be repeated with total credits not to exceed six (6) hours. May be offered on a Pass/Fail basis. Prereq: Departmental approval.

310 Linear Algebra (3) Vectors, matrices, systems of linear equations, determinants, inverses of matrices, vector spaces, linear transformations, eigenvalues and eigenvectors. Prereq: MATH 160 or 251 or 314.

314 Foundations of Mathematics (3) Proof techniques, sets, propositional calculus, functions, relations and properties of integers. Prereq: MATH 140 or 160 or 185 or 210 or 251.

320 Multivariate Calculus (4) (TBR: MATH 2110) Vector-valued functions, functions of several variables. Differentials, gradients and extremes. Multiple integrals, line and surface integrals. Prereq: A grade of C or better in MATH 252.


340 (540) Numerical Analysis (3) Formulation of numerical problems for solution on a digital computer. Error analysis and control, nonlinear equations, differentiation, integration, systems of equations, differential equations, curve fitting and eigenvalue problems. Prereq: CSCI 221 and MATH 252; CSCI 301 or MATH 310. (Same as CSCI 340/540)


410 (610) Geometry (3) Euclidean geometry (Birkhoff’s and Hilbert’s Postulates), non-Euclidean geometries (hyperbolic and elliptic), finite geometries, transformational geometry and theory of area. Prereq: MATH 314.

420 (620) History of Mathematics (3) Study of the development of mathematics from ancient to modern times through problem solving. The investigation of the lives and works of specific mathematicians with particular attention to the development of ideas, notation and the influence of mathematics on society. Prereq: MATH 160 or 251.

430 (630) Complex Variables (3) Algebraic operations and geometry of complex numbers, definitions of limit, continuity and analytic functions, differentiation, mapping of simple functions, line integrals, Cauchy integral formula, Laurent series, evaluation of real integrals using residue theorem. Prereq: MATH 320.


481-482 (681-682) Real Analysis I, II (3, 3) Sets and countability. The real number systems. Sequences, limits, infinite series, metric spaces, continuous functions, uniform continuity and convergence. Riemann and Lebesgue integration. Students are required to submit written work and make an oral presentation. Must be taken in sequence. Prereq: MATH 314 and 320.

491-492 (691-692) Special Topics [Topic title] (1-3) Selected topics in mathematics, student research, or seminar. Course may be repeated with total credits not to exceed six hours. Prereq: MATH 320 and departmental approval.

498 Undergraduate Research Experience I (2) Introduction to research methodologies and tools including LaTeX and MathSciNet. Presenting mathematics in written and oral formats. Ethics in research. This course includes substantial directed individualized study leading to the preparation of a significant paper. Prereq: consent of the department chair. Cannot receive credit for both MATH 498 and STAT 498. Grading on a pass or fail basis.

499 Undergraduate Research Experience II (1) The presentation of mathematics works in both oral and written formats. This course will finalize the significant paper begun in MATH/STAT 498 and based on the student’s individual research. This will require that it be presented at a regional or national meeting. Prereq: MATH 498 and consent of the department chair. Graded on Pass/Fail basis.

710 Selected Topics in Arithmetic for Teachers (3) Selected topics in arithmetic through student research, seminars, or workshops. Prereq: Departmental approval.

720 Selected Topics in Algebra for Teachers (3) Selected topics in algebra through student research, seminars, or workshops. Prereq: Departmental approval.

730 Selected Topics in Geometry for Teachers (3) Selected topics in geometry through student research, seminars, or workshops. Prereq: Departmental approval.

Microbiology (MBIO)

251 General Bacteriology (4) (TBR: BIOL 2230) Fundamentals of microbiology with emphasis on morphology, classification, nutrition, mechanisms of pathogenesis and body defenses. Meets the needs of all programs requiring one course in microbiology. Three one-hour lectures and one two-hour lab. Students may not receive credit for both MBIO 251 and MBIO 310.

310 General Molecular Microbiology (4) An introductory, molecular oriented course dealing with bacterial structure, nutrition and growth, metabolism of heterotrophic bacteria and bacterial and bacteriophage genetics. Meets the needs of all programs requiring one course in microbiology. Three one-hour lectures and one two-hour lab. Students may not receive credit for both MBIO 251 and MBIO 310.

311 Public Health Microbiology (4) Public health microbiology dealing with epidemiology, sterilization and disinfection, common pathogenic bacteria and viruses, mechanisms of pathogenesis, methods of isolation and identification of pathogens, mechanisms of action of selected antibiotics and water and food microbiology pertaining to public health problems. Three one-hour lectures and one two-hour lab. Prereq: MBIO 251 or 310.

401 (601) Immunology (3) An introductory course dealing with the functions and effects of the immune system. Emphasis on humoral immunity, cellular immunity, serology, hypersensitivities, autoimmunity and immunodeficiency. Three, one-hour lectures. Prereq: MBIO 251 or MBIO 310.
390 Microbiology / Military Science and Leadership

402 (602) Immunology Laboratory (1) A lab course designed to introduce students to commonly-used immunologic techniques, including antibody purification, immunodiffusion, SDS-polyacrylamide gel electrophoresis, western blotting and enzyme-linked immunosorbent assay. One two-hour lab. Prereq/coreq: MBIO 401.

410 Microbiology of Foods (4) Microorganisms in natural and processed foods; their origin, nature and effect on foods. Foodborne pathogens, toxins and food spoilage. Inhibition and destruction of bacteria in foods. Three one-hour lectures and one two-hour lab. Prereq: MBIO 251 or MBIO 310.

420 Virology (3) The fundamental principles of virology, classification and general characteristics of bacterial, animal, human and plant viruses. Three one-hour lectures. Prereq: MBIO 251 or MBIO 310 or BIOL 337 or instructor’s permission.

453-454 (653-654) Research Participation (2, 2) Experience in active research projects under supervision of faculty members. Taught by arrangement. Prereq: Junior or Senior standing, minimum average grade of 3.00, and research supervisor’s approval prior to enrollment.

Military Science and Leadership (MSL)

101 Foundations of Officership (3) Examines the unique duties and responsibilities of officers, discusses organization and the role of the Army, reviews basic life skills pertaining to fitness and communication and analyzes Army values and expected ethical behavior. Three hours lecture/lab. Students must meet enrollment and continuation requirements outlined in the Department of Military Science and Leadership section. Prerequisite for entry into advanced program unless waived by the Professor of Military Science.

102 Basic Leaderships (3) Presents fundamental leadership concepts and doctrine, practices effective skills that underlie problem solving, applied active listening and feedback skills, examines factors that influence leader and group effectiveness and examines the officer experience. Three hour lecture/lab. Students must meet enrollment and continuation requirements outlined in the Department of Military Science and Leadership section. Prerequisite for entry into advanced program unless waived by the Professor of Military Science.

201 Individual Leadership Studies (3) Develops knowledge of self, self-confidence and individual leadership skills. Develops problem solving and critical thinking skills and applies communication, feedback and conflict resolution skills. Two 50-minute lectures and one two-hour lab. Students must meet enrollment and continuation requirements outlined in the Department of Military Science and Leadership section. Prerequisite for entry into the advanced program unless waived by the Professor of Military Science.

202 Leadership and Teamwork (3) Focuses on self-development guided by knowledge of self and group processes. Challenges current beliefs, knowledge and skills. Provides equivalent preparation for the ROTC Leader Development and Assessment Course and the Leader’s Training Course. Two 50-minute lectures and one two-hour lab. Students must meet enrollment and continuation requirements outlined in the Department of Military Science and Leadership section. Prerequisite for entry into the advanced program unless waived by the Professor of Military Science.

291 Leader’s Training Course (6) Training normally is taken during the summer between the second and third years by those students who have not completed basic military training or the required basic military science courses for advanced course enrollment. Training is conducted at a designated U.S. Army installation and includes hands-on, practical leadership training with intensive counseling and feedback. The course focuses on confidence, leadership and team building, along with training skills in basic rifle marksmanship and land navigation. The highlight of the course is a six-day field phase where students will experience a series of challenging leadership opportunities while being mentored and counseled by cadre. The student must register for this course following successful camp completion in order to receive the appropriate credit. A letter grade will be awarded by the Professor of Military Science.
Science based on camp results. Prereq: Approval of the Professor of Military Science.

301 Leadership and Problem Solving (4)
Examines basic skills that underlie effective problem solving, analyzes the role officers played in the transition of the Army from Vietnam to the 21st century, reviews the features and execution of the Leadership Development Program, analyzes military missions and plans military operations and executes squad battle drills. Two 75-minute lectures, one two-hour lab and three hours physical training. Students must meet enrollment and continuation requirements outlined in the Department of Military Science and Leadership section.

302 Leadership and Ethics (4)
Probes leadership responsibilities that foster an ethical command climate, develops leadership competencies, prepares for success at the ROTC National Advanced Leadership Camp, recognizes leader responsibility to accommodate subordinate spiritual needs and applies principles and techniques of effective written and oral communication. Two 75-minute lectures, one two-hour lab and three hours physical training. Students must meet enrollment and continuation requirements outlined in the Department of Military Science and Leadership section.

310 American Military History (3)
American military history from the American Revolution to the present. Evaluation of significant battles from the viewpoints of the participants, their resources, decision-making techniques and the nine principles of war. Discussion of all of America’s wars. Emphasis on the Civil War, World War I, World War II, Korea and Vietnam. (Same as HIST 310)

401 Leadership and Management (4)
Builds on the National Advanced Leadership Camp experience to solve organizational and staff problems and discusses staff organization, functions and processes. Analyzes counseling responsibilities and methods, examines principles of subordinate motivation and organizational change and applies leadership and problem solving principles to a complex case study/simulation. Two 75-minute lectures, one two-hour lab and three hours physical training. Students must meet enrollment and continuation requirements outlined in the Department of Military Science and Leadership section.

402 Officership (4)
Capstone course exploring topics relevant to second lieutenants entering the Army. Describes legal aspects of decision making and leadership, analyzes Army organization for operations from the tactical to strategic level, assesses administrative and logistics management functions, discusses reporting and Permanent Change of Station process, performs platoon leader actions and examines leader responsibilities that foster an ethical command climate. Two 75-minute lectures, one two-hour lab and three hours physical training. Students must meet enrollment and continuation requirements outlined in the Department of Military Science and Leadership section.

421 Contemporary Developments in the U.S. Army (3)
A survey of current programs and issues affecting readiness of the Army today. Included is mobilization and deployment of reserve component forces, force modernization and combined arms operations. Student presentations on selected subjects. Three hours lecture/conference. Prereq: Approval of the Professor of Military Science.

442 Nurse Summer Training Program (6)
Provides Army ROTC nurse cadets with clinical experience in a hospital setting while introducing them to the duties, roles, responsibilities and expectations of an Army Nurse Corps officer. Exercises leadership skills in a hospital environment by planning, organizing, decision making, implementing and being accountable for the outcome of nursing care. Encourages students to develop leadership strategies through learning experiences throughout this clinical program. Collaborate with health care professionals on decisions related to patient care, management, unit issues and strategies utilized in the provision of medical care to a select population. A minimum of 40 hours per week for three weeks. Prereq: Contracted cadet; completion of MSL 301, 302 and 491; enrolled in the nursing program; and approval from the Nursing Department Chair and the Professor of Military Science and Leadership.
National Advanced Leadership Camp

Training program normally taken during the summer between the MS III and MS IV years. Training is required by all contracted cadets seeking enrollment as an MS IV student. The student must register for this course following successful completion of camp in order to receive the appropriate credit. A letter grade will be awarded by the Professor Military Science based on camp results. Prereq: Approval of the Professor of Military Science.

Music (MUS)

100 Topics in Music Theory (1) A review of basic theory skills, including music notation, scales, key signatures, triads, intervals and rhythms. Prereq: permission of Department Chair.

108 Introduction to Technology in Music (1) An introduction to computer software for use in music.

111 Masterpieces of Music (3) (TBR: MUS 1030) A survey of world masterpieces of music from the Baroque period to the present.

111H Honors Masterpieces of Music (3) A survey of world masterpieces of music from the Baroque period to the present for students in good standing in Honors Programs.

112 Music in Our Time (3) A study of contemporary music in various cultures. For students in curricula other than music. May not be used toward a major in music.

112H Honors Music in Our Time (3) A study of contemporary music in various cultures for students in good standing in Honors Programs. For students in curricula other than music. May not be used toward a major in music.

113 Survey of Western Masterpieces and World Music (3) A survey of significant and historical Western Masterpieces and World Music designed for the music major and minor where students listen to, describe and respond aesthetically to musical works. Students will develop a personal aesthetic perspective of music through studying its function in various cultures and societies, especially as music relates to humanity’s ability to represent cultural values through musical expression. Students are expected to be able to read music.

120 Fundamentals of Music Theory (3) Basic music theory skills, including music notation, scales, key signatures, triads, intervals and rhythms.

121 Music Theory I (3) Sequential study of music fundamentals, harmonic progression, part-writing procedures and stylistic elements. Prereq: Passing grade on music theory entrance exam or grade of C or better in MUS 120.

122 Music Theory II (3) Continued sequential study of music fundamentals, harmonic progression, part-writing procedures and stylistic elements. Prereq: MUS 121.

123 Aural Skills I (1) Should be taken concurrently with MUS 121.

124 Aural Skills II (1) Should be taken concurrently with MUS 122. Prereq: MUS 123.

161-162 Diction for Singers I and II (1, 1) English and Italian diction (161) German and French diction (162) and their special requirements as related to the singing voice. For applied voice students. Other students must have the instructor’s approval. Must be taken in sequence.

191, 192, 193 Topics in Music (1, 2, 3) Specific selected topics in music. Topics and prerequisites to be announced. May be repeated for credit.


222 Music Theory IV (3) Advanced part writing and analysis in the standard harmonic vocabulary. Prereq: MUS 221.

223 Aural Skills III (1) Continued development of sight-singing and aural skills needed by musicians. Should be taken concurrently with MUS 221. Prereq: MUS 124.

224 Aural Skills IV (1) Continued development of sight-singing and aural skills needed by musicians. Should be taken concurrently with MUS 222. Prereq: MUS 223.

225 Composition (1) May be repeated for credit. Prereq: instructor’s approval.
320 Orchestration and Arranging (3) Scoring for small instrumental combinations, full band and orchestra and vocal-instrumental combinations. Special focus on 20th century practices and techniques. Prereq: MUS 222 or permission of Department Chair.

333-334 Piano Literature (1, 1) Standard piano repertoire from early keyboard works customarily played on the piano today to the present.

335-336 Vocal Literature (1, 1) Repertoire for the solo voice from 1600 to the present. Includes opera and oratorio, but with particular emphasis on the art song. Practice and interpretation illustrated by recordings, class members and instructor. Prereq: Upper-division standing or instructor’s approval.

337-338 Instrumental Literature (1, 1) Repertoire for brass, woodwind, or percussion from the earliest music currently performed on these instruments to the most recent. Specific instruments designated by section.

341 Music History and Literature I (3) A survey of the development of music from earliest known examples through the middle of the 18th century. Students are required to write reports and give oral presentations. For music majors and minors. Prereq: MUS 122.

342 Music History and Literature II (3) A survey of the development of music from the middle of the 18th century to the present. Students are required to write reports and give oral presentations. For music majors and minors. Prereq: MUS 341.

343 History of Church Music and Liturgical Practices (3) History of music in the church and related liturgical practices from the tenth century to the present. History and practices relevant to major contemporary Christian denominations.

344 Hymnody, Sacred Repertoire and Church Music Techniques (3) The practices and sources of sacred hymnody from its origins in the fifteenth century to the present. Examine music which would be appropriate for use in church. Discuss and explore techniques relevant to directing a church music program.

353 Beginning Choral Techniques, Literature and Conducting (3) The development of the fundamentals of conducting; selection and teaching of choral literature for typical school and/or church ensembles; sequencing and teaching curriculum for the choral ensemble. This course includes a minimum of 10 hours of field experience. Prereq: MUS 221.

354 Beginning Instrumental Ensemble Techniques, Literature and Conducting (3) The development of the fundamentals of conducting; selection and teaching of instrumental literature for typical school ensembles; sequencing and teaching curriculum for the instrumental ensemble. This course includes a minimum of 10 hours of field experience. Prereq: MUS 221.

363-364 Piano Pedagogy (1, 1) Materials and methods for class piano and studio teaching.

365 Voice Science and Pedagogy (2) The mechanics of respiration, phonation and articulation as related to singing and care of the voice. Methods and materials used in the teaching of singing and a survey of various national schools of singing styles.

366-367 Instrumental Pedagogy (1, 1) Materials and methods for teaching brass, woodwind, or percussion. Specific instruments designated by section.

391, 392, 393 Topics in Music (1, 2, 3) Selected topics in music. May be repeated for credit. Topics and prerequisites may be announced.

401 Independent Study (3) Directed reading or research by arrangement. May be repeated for credit. Permission of department chair required.

417 Marching Band Procedures (3) Developing instrumental marching units and designing show productions. This course includes a minimum of 10 hours of field experience.

420 Form and Analysis (3) Units of structure, song forms and single movement forms representing a variety of musical idioms, styles and periods. Special focus on 20th century practices and techniques. Prereq: MUS 222.
425 (625) Composition (1) May be repeated for credit. **Prereq:** MUS 222 or instructor’s approval.

430 Internship in Church Music (3) Supervised experience with a practicing church music director.

431 Larger Choral Works and Rehearsal Strategies (3) Selection and rehearsal of extended choral forms suitable for school or church settings; understanding the working of instruments; rehearsal strategies for choral literature accompanied by instrumental ensembles. **Prereq:** MUS 453. **Coreq:** MUS 432.

432 Laboratory in Rehearsing Choral Works (1) Practical skills in rehearsing and conducting choral works. This course includes a minimum of 10 hours of field experience. **Prereq:** MUS 453. **Coreq:** MUS 431.

440 Senior Project in Music (1) Culminating project for music majors in the Bachelor of Arts degree with a Major in Music. Taken by arrangement with a faculty member approved by the Chair of the Department of Music.

453 Advanced Choral Techniques, Literature and Conducting (3) Advanced concepts of teaching, rehearsing and administrating a choral program; advanced conducting techniques in choral conducting and rehearsing; selection of appropriate literature for choral groups. This course includes a minimum of 10 hours of field experience. **Prereq:** MUS 353 and MUED 260.

454 Advanced Instrumental Ensemble Techniques, Literature and Conducting (3) Advanced concepts of teaching, rehearsing and administrating an instrumental program; advanced conducting techniques in instrumental conducting and rehearsing; selection of appropriate literature for instrumental groups. This course includes a minimum of 10 hours of field experience. **Prereq:** MUS 354, MUED 260.

463 Practicum in Piano Teaching (1) Supervised teaching in the piano class and private studio. May be repeated for credit.

466 Practicum in Instrumental Teaching (1) Supervised teaching in brass, woodwind, percussion, or guitar. Specific instruments designated by section. May be repeated for credit.

481-482 Piano Tuning and Technology (2, 2) Physical properties of tuning and temperament, tuning technique, action regulation, voicing, stringing and rebuilding. **Prereq:** MUS 122 or instructor’s approval.

701-702 Independent Study in Music (3, 3) Directed reading or research.

791, 792, 793 Topics in Music (1, 2, 3) The study of selected, specific topics in music. Topics and prerequisites to be announced.

**Music, Applied (MUAP)**

Non-music majors may not enroll in applied music classes, either class or private instruction, without approval from the department chair.

### Class Instruction

**Lower-division** (two class hours per week.)

- **101-102, 201-202 Piano Class** (1 credit per semester)
- **103-104, 203-204 Voice Class** (1 credit per semester)

**Upper-division** (two class hours per week.)

- **301 String Class** (1)
- **302 Woodwind Class** (1)
- **303 Brass Class** (1)
- **304 Percussion Class** (1)

### Private Instruction

Study of technique and repertoire appropriate to the instrument or voice including improvisation studies. Lesson and practice requirements for each major are as follows:

**Bachelor of Arts in Music, Minor in Music**

1/2 hour of instruction and five hours individual practice per week. (Register for MUAP courses ending in 1.)

**Bachelor of Music, Music Education Option**

1 hour of instruction and 10 hours individual practice per week. (Register for MUAP courses ending in 2.)
Bachelor of Music, Performance Option

Instrumental Emphasis, Piano Emphasis, or Voice Emphasis: 1 hour of instruction and 20 hours individual practice per week. (Register for MUAP courses ending in 4.)

Instrumental Pedagogy Emphasis or Piano Pedagogy Emphasis: 1 hour of instruction, 20 hours of individual practice per week for lower-division study and 15 hours of individual practice per week for upper-division study. (Register for MUAP courses ending in 4 for lower-division study and MUAP courses ending in 3 for upper-division study.)

Permission from the faculty is required for students to advance to the upper-division level. A Bachelor of Music major may not study more than six semesters in the lower-division of the major applied voice or instrument. Students from non-music curricula must have permission of the instructor to register for private instruction. May be repeated for credit. Applied music fee required.

Minor in Music

111, 311 Piano (1)
121, 321 Voice (1)
141, 341 Flute (1)
151, 351 Double Reed (1)
161, 361 Clarinet (1)
171, 371 Saxophone (1)
181, 381 Trumpet (1)
191, 391 French Horn (1)
211, 411 Trombone (1)
221, 421 Baritone Horn (1)
231, 431 Tuba (1)
251, 451 Percussion (1)
261, 461 Harpsichord (1)
271, 471 Organ (1)

Bachelor of Arts in Music, Bachelor of Music, Music Education Option

112, 312 Piano (1)
122, 322 Voice (1)
142, 342 Flute (1)
152, 352 Double Reed (1)
162, 362 Clarinet (1)
172, 372 Saxophone (1)
182, 382 Trumpet (1)
192, 392 French Horn (1)
212, 412 Trombone (1)
222, 422 Baritone Horn (1)
232, 432 Tuba (1)
252, 452 Percussion (1)

Bachelor of Music, Performance Option

Instrumental Emphasis, Piano Emphasis, or Voice Emphasis

114, 314 Piano (2)
124, 324 Voice (2)
144, 344 Flute (2)
154, 354 Double Reed (2)
164, 364 Clarinet (2)
174, 374 Saxophone (2)
184, 384 Trumpet (2)
194, 394 French Horn (2)
214, 414 Trombone (2)
224, 424 Baritone Horn (2)
234, 434 Tuba (2)
254, 454 Percussion (2)

Instrumental Pedagogy Emphasis or Piano Pedagogy Emphasis

114, 313 Piano (2)
124, 323 Voice (2)
144, 343 Flute (2)
154, 353 Double Reed (2)
164, 363 Clarinet (2)
174, 373 Saxophone (2)
184, 383 Trumpet (2)
194, 393 French Horn (2)
214, 413 Trombone (2)
224, 423 Baritone Horn (2)
234, 433 Tuba (2)
254, 453 Percussion (2)
264, 463 Harpsichord (2)
274, 473 Organ (2)
Recital

110, 310 Recital (1, 1) Exploration of musical repertoire and recital performance practices including those from non-Western cultures. Attendance at all weekly student recitals and twelve or two-thirds (whichever is fewer) of the evening concerts sponsored by the Department of Music each semester. Required of all music majors. Pass-Fail. Music majors and minors only.

395 Junior Recital (1-2) Preparation of a solo public performance. Final approval for presentation will be given by the faculty. Student will receive upper-division private instruction during the term in which the performance is given.

495 Senior Recital (1-2) Preparation of a solo public performance. Final approval for presentation will be given by the faculty. Student will receive upper-division private instruction during the term in which the performance is given.

Music Education (MUED)

260 Introduction to Music Education (3) Exploration of the field of music education and basic concepts in the musical education of children and adults. Philosophical, psychological and social aspects of music as a basic part of the intellectual and physical development of children. This course includes a minimum of 10 hours of field experience observations and five hours of community service.

310 General Music (3) Skills and methodologies utilized by specialists in the teaching of general music in classroom settings. Includes traditional western music as well as music of diverse, non-western sources. This class requires a field experience (i.e., practicum) that occurs BEFORE the fall semester. This course includes a minimum of 10 hours of field experience. Prereq: MUED 260.

391, 392, 393 Topics in Music Education (1, 2, 3) Selected topics in music education. Topics and prerequisites to be announced. May be repeated for credit.

400 Senior Seminar in Music Education (3) Current issues in the profession of music education, review of national standards and the relationship of aesthetic education to the overall development of young people. Historical, philosophical, psychological and social aspects of music in the curriculum. Measurement and evaluation of music instruction. This course includes a minimum of 10 hours of field experience. Prereq: MUED 310.

401 Independent Study (3) Directed reading or research by arrangement. May be repeated for credit. Permission of department chair required.

461 Internship in Teaching Music (12) Supervised experience (one semester) of music in off-campus centers. Must be taken concurrently with MUED 462. Prereq: Admission to Teacher Education, TCED 301, 302 and all required music methods courses. (Application for internship must be filed no later than two semesters prior to enrolling.)

462 Seminar in Teaching Music (3) Philosophical and social aspects of music as a part of basic education and intellectual development. Organization, structure and evaluation of sequential music curricula. Professional organizations and continual professional growth. Implications of the Tennessee Instructional Model and the Tennessee Career Development Program for Music Education. Evaluations about music and specific techniques to produce expressive performances. Must be taken concurrently with MUED 461.

471 Student Teaching in Music-Grades K-6 (6) Supervised student teaching of music in grades K-6 in off-campus centers for a minimum of 6.5 weeks. Must be taken concurrently with MUED 473. (Normally taken concurrently also with MUED 472.) Prereq: Admission to Teacher Education, TCED 302 and all other required courses in the Professional Education core.

472 Student Teaching in Music-Grades 7-12 (6) Supervised student teaching of music in grades 7-12 in off-campus centers for a minimum of 6.5 weeks. Must be taken concurrently with MUED 473. (Normally taken concurrently also with MUED 471.) Prereq: Admission to Teacher Education, TCED 302 and all other required courses in the Professional Education core.
473 Seminar in Teaching Music (1) Structured seminar for advanced discussion of instructional and classroom management, variety in methodology, discipline, school law, professionalism and related topics. Emphasis will be placed on oral expression and written communication. Coreq: MUED 471-472 (student teaching courses).

701-702 Independent Study in Music Education (3, 3) Directed reading or research.

791, 792, 793 Topics in Music Education (1, 2, 3) Selected topics in music education. Topics and prerequisites to be announced.

Music Ensembles (MUEN)

Study and performance of music appropriate to each ensemble including both traditional repertoire and music of diverse cultures. Membership is open by audition to all students. May be repeated for credit.

151, 351 Marching Band (1, 1)
152, 352 Wind Ensemble (1, 1)
153, 353 Concert Jazz Band (1, 1)
154, 354 Brass Ensemble (1, 1)
155, 355 Woodwind Ensemble (1, 1)
156, 356 Percussion Ensemble (1, 1)
158, 358 Concert Band (1, 1)
160, 360 Piano Ensemble (1, 1)
161, 361 Accompanying (1, 1)
162, 362 University Singers (1, 1)
163, 363 Choral Society (1, 1)
164, 364 Collegiates (1, 1)
165, 365 New Pacer Singers (1, 1)
166, 366 Treble Choir (1, 1)
167, 367 Lyric Opera Theatre (1, 1)
168, 368 Chamber Ensemble (1, 1)

Natural Resources Management (NRM)

100 Introduction to Natural Resource Management (3) Survey of natural resources management career opportunities; a history of resource management; forests, wildlife, soils and recreation components; government and private management entities; commercial, conservation and preservation philosophies of land management discussed.

101 Wildlife, Conservation and Environmental Issues (3) This course is intended for students enrolled in curricula other than Natural Resources Management who are interested in wildlife and conservation issues. Includes a review of wildlife and resource history and a survey of current resources at global, national and regional scales. Issues will be discussed including biological diversity and endangered species, pollution and habitat loss, values of natural resources to humans and human philosophies and perspectives on conservation. Not intended for Natural Resources Management majors.

180 Topics in Natural Resources Management [Topic title] (1-3) Study of special topics, lab, or field experiences at an introductory level. Topics include, but are not restricted to: Agricultural Economics, Animal Science, Plant and Soil Science, Agricultural Education, Agricultural Engineering Technology, Natural Resources Management, Chemistry, Physics, Biology. This course may be repeated for credit with advisor’s approval. The course is graded pass/fail. (Same as AGRI 180)

200 Interpretive Tours—Practicum (2) Application of interpretive methods off campus in cooperation with other agencies such as Tennessee State Parks, Tennessee Wildlife Resources Agency, Historical Society, National Park Service, etc. Students will assist in giving conducted tours and work on special projects and reports. Prereq: Instructor’s approval.

210 Mediating Environmental Conflicts (3) A communications and critical thinking course involving current conservation issues—relating to forestry, wildlife, fisheries, agriculture (and other land use), human population growth, air and water pollution, as well as other natural resource concerns. This course will involve interpersonal, oral and thinking skills leading to mediating environmental conflicts. There will be active group interaction and student participation during class. Open to all students, regardless of major.
230 Travel Studies in Agriculture and Natural Resources (1-3) Travel course to study topics in Agriculture and Natural Resources either domestic or international. Requires travel to another region or country and presentation of oral and written reports. May be repeated one time for credit. Prereq: Instructor’s approval. (Same as AGRI 230)

301-302 Special Problems (1, 1) Independent study projects for students exhibiting special interest and abilities in selected subject areas. Written project outline and report of results required. Taught only by arrangement prior to registration.

350 Environmental Regulation (3) Students will be introduced to environmental regulation and the role of environmental professionals in the workplace. Emphasis will be placed on the interrelationships among businesses, federal and state regulatory programs. Examples will come from current regulatory programs and emerging areas on concern. The perspective will be that of environmental professionalism including responsibilities and ethics. Prereq: Junior standing.

375 Environmental and Agricultural Law (3) Survey of law and its application to agricultural and natural resource management. Property, contracts, torts, drainage and water rights. Environmental law, land tenure, employment, forms of business organization, estate planning, regulatory law and other selected topics. (Same as AGEC 375)

390 Career Planning in Natural Resources Management (2) Assessment of personal and academic potential for professional careers by the Agriculture and Natural Resources Management graduate. Efforts directed toward preparing for, interviewing and securing a position. Critiques of related extra curricular events. Survey of the history, philosophy and ethics of Agriculture and Natural Resources Management and crucial issues affecting agriculture and natural resources. Students are required to write reports and present professional oral presentations. Prereq: Junior standing. (Same as AGRI 390)

401-402 (601-602) Research Participation (3, 3) Application of the scientific method of inquiry to solution of problems through student involvement with faculty in research projects. Presentation of written project outline and written and oral reports required. Taught only by arrangement prior to registration. Prereq: Senior standing and minimum GPA of 2.75.

410 (610) Nonindustrial Private Forestry (3) Principles of forestry and management of small private tracts of forestland. Multiple uses of these forests and how to market and harvest products from them. How to protect them, improve their quality and keep records. (Same as PLSC 410/610.)

420 Supervised Field Experience (3, 4) Minimum of one semester (or two semesters for four hours credit) of supervised study and experience cooperative with approved university biological stations, governmental agencies, or private enterprises at off-campus locations. Term paper describing application of resource management techniques required. Joint evaluations by on-the-job and academic supervisors. Prereq: Instructor’s approval.

430 Natural Resources Research (3) Foundations and application of the scientific method in natural resources studies. Hypothesis formation, literature review, experimental and sampling design, pilot studies and power analysis, data collection, analysis and interpretation of results, written and oral presentation components. Prereq: PRAD 200 or MATH 210 and Junior standing.

440 (640) Regional Studies in Natural Resources Management (3) Evaluation of natural resources and administration on a regional basis by visits to selected public, private and commercial agencies and lands.

450 (650) Dynamics and Development of Leadership in Natural Resources Management (3) A study of the dynamics, strategies and parliamentary procedure skills needed by leaders of occupational, civic and social organizations. Practical approaches through group interactions and participation. A detailed examination of organizations and individuals within organizations. Students are required to write reports and give oral presentations. Prereq: Junior standing. (Same as AGRI 450/650)
461 Selected Topics in Natural Resources Management (1) Current and historical topics in natural resources management. Review of literature on classic natural resource issues. Subjects determined by instructor. Active student participation including oral and written presentations. This course cannot be substituted for BIOL 410-411. Prereq: Major in Natural Resources Management, or Biology, or have instructor’s approval.

701-702 Master’s Thesis (3, 3) Thesis proposal and research; thesis writing, presentation and defense. May repeat enrollment. P/N only.

722 Production of Biorenewable Resources (3) An exploration of plant species with potential as crops for industrial uses including biofuels. An overview of the chemistry of plant products and extraction techniques for useful products including biofuels, unique fatty acids and pharmaceuticals from new and existing crops. Will include a review of fundamental concepts in bioenergy and biobased products including engineering thermodynamics and organic chemistry. (Same as PLSC 722)

724 Advanced Grazing Management Techniques (3) An in depth discussion of the integral biological and physical components of pasture systems. Students will learn how soil chemical and physical properties interact with plant growth in the production of forage crops. The focus of the course will be to examine the impact of management practices on the ecology of grazing livestock in pasture systems. Students will evaluate grazing systems and develop a management plan as a part of the course activities. A paper dealing with pasture ecology will be a required component of the course. (Same as PLSC 724)

730 Advanced Natural Resources Economics (3) Economic principles associated with natural resource use and preservation. Emphasis on economic analysis and policy decision making tools for natural resources and non-market goods. Valuation techniques such as benefit cost analysis, willingness to pay, willingness to accept, hedonic pricing, travel cost models, intertemporal substitution and issues related to economic and social efficiency will be discussed.

760 Management of Interpretive Resources (3) Principles of interpretation and an examination of the resources used for interpretive services. There will be an overview of the application of management principles to interpretive services. Sociological concepts, relevant innovations, resource inventory and master planning will be explored. Emphasis will be placed on the role of interpretation to accomplish an organization’s mission. (Same as PRAD 760)

765 Conservation and Preservation of Historic Structures (3) Principles and methods related to the use, preservation and interpretation of historic structures. This will include the application of technology for the identification and cataloging of structures that have historical significance. Relevant laws and regulations will be reviewed. Special attention will be given to construction methods and materials as they apply to preservation. (Same of PRAD 765)

770 Topics in Natural Resources Management (1-6) Topics in selected areas of natural resources management. For graduate students in the Master of Science in Agriculture and Natural Resources Systems Management program. Can be used to meet requirements in the MSANR curriculum.

791 Research/Internship in Natural Resources Management (1-3) This will be either: 1) a major research project associated with natural resources management, or 2) a supervised work experience in natural resources management for a minimum of three months (requires weekly reporting from student and a final report from the immediate supervisor). Research projects shall include: a review of literature, data collection methodology, data presentation and a final written report. May repeat enrollment. No more than three semester hours credit will be counted toward requirements for the M.S.A.N.R. degree. P/N only.

**Nursing (NURS)**

201 Pharmacology I (2) Examines classifications, uses, actions and side effects of major drug groups and nursing responsibilities for safe drug administration, including client teaching. Focuses on drugs used for acute health care problems. Two hour lecture. Prereq: Admission to clinical nursing program or instructor’s approval.
202 Pharmacology II (2) Continues examination of classifications, uses, actions and side effects of major drug groups and nursing responsibilities for safe drug administration, including client teaching. Focuses on drugs used for chronic and mental health care problems. Two hour lecture. Prereq: NURS 201 or instructor's approval.

212 Foundations in Nursing I (6) Beginning course in nursing which emphasizes concepts, principles and basic nursing skills utilized in nursing practice. Three hours lecture and six hours lab. Prereq: Acceptance to clinical nursing courses, First Aid and CPR Provider C certifications and ZOOL 251. Coreq: ZOOL 352, NURS 201 and 221.

221 Concepts and Theories in Nursing (2) Use of concepts and theories of professional nursing practice as the basis for implementing and evaluating health care. Two hours lecture. Prereq: Acceptance to clinical nursing courses or instructor's approval.

231 Foundations in Nursing II (6) Continuation of Foundations in Nursing I emphasizes the use of the nursing process in providing care for client/client systems with basic health care needs. Two hours lecture and eight hours lab. Prereq: NURS 201, 212, 221 and ZOOL 352. Coreq: NURS 202 and 241.

241 Health Assessment (5) Emphasizes concepts and skills of health assessment. Prepares the nurse to assess and analyze the physical and psychosocial status of individuals. Four hours lecture and two hours lab. Prereq: NURS 212 and ZOOL 352 or instructor's approval. Coreq: NURS 202 and 231.

280-289 Topics in Health Care (1-3) Group or individually planned topics or projects of concentrated studies in areas of need and interest. May be taken for credit or Pass/Fail. Prereq: Completion of nursing curriculum prior to specific topic level or instructor's approval.

312 Health Assessment (5) The course for Registered Nurses expands on concepts and skills of health assessment introduced at the technical level. Provides the RN with a broader knowledge base required in baccalaureate nursing education. Prepares the nurse to assess and analyze the physical and psychosocial status of individuals. Four hours lecture and two hours lab. Prereq: Licensure as a Registered Nurse and instructor's approval. Students cannot use credit for both NURS 241 and 312 toward graduation requirements.

321 Acute and Chronic Health Care Nursing I (7) Emphasizes use of the nursing process in care of client/client systems with acute and chronic health needs. Attention will be given to prevention, health promotion and rehabilitation. Three hours lecture and eight hours lab. Prereq: NURS 202, 231 and 241. Coreq: NURS 341. Students cannot use credit for both NURS 321 and NURS 350 toward graduation requirements.

331 Acute and Chronic Health Care Nursing II (7) Continues emphasis on nursing needs of client/client systems with acute and chronic health needs. Attention will be given to prevention, health promotion and rehabilitation. Three hours lecture and eight hours lab. Prereq: NURS 321 and 341. Coreq: NURS 362.

341 Mental Health Nursing (6) Emphasizes concepts and principles necessary to understand client/client systems as they evolve through life experiences, utilizing the nursing process to assist them to meet their mental health needs. Three hours lecture and six hours lab. Prereq: NURS 202, 231 and 241. Coreq: NURS 321.

350 Transition to Professional Nursing (8) A transition course for Registered Nurses taken in place of NURS 321. Expands on nursing content introduced at the technical level to provide the RN with the broader knowledge base required in baccalaureate nursing education. Five hours lecture and six hours lab. Prereq: Licensure as a Registered Nurse and either admission to the clinical nursing program with completion of NURS 202 and 241 or 312; or instructor approval. Students cannot use credit for both NURS 350 and NURS 321 toward graduation requirements.

362 Trends and Issues in Nursing (1) Examines the nurse’s role in change through evaluation of current trend and issues impacting upon the nursing profession and health care delivery. Writing and speaking intensive course. Two hours seminar. Prereq: NURS 321 and 341 or instructor's approval. Coreq: NURS 331.
380-389 Topics in Health Care (1-3) Group or individually planned topics or projects of concentrated studies in areas of need and interest. May be taken for credit or pass/fail. Prereq: Completion of nursing curriculum prior to specific topic level or instructor’s approval.

401 Family Health Nursing (4) Examines normal developmental and reproductive tasks and related health needs and issues of client/client systems. Two hours lecture and four hours lab. Prereq: NURS 331 and 362. Coreq: NURS 406 and 431.

406 Pediatric Health Care Nursing (4) Emphasizes normal developmental tasks and related health needs and issues of client/client systems with a focus on pediatric client and the family unit. Two hours lecture and four hours lab. Prereq: NURS 331 and 362. Coreq: NURS 401 and 431.

411 Advanced Health Care Nursing (6) Emphasizes use of the nursing process to synthesize complex concepts in providing care for client/client systems with advanced health needs. Three hours lecture and six hours lab. Prereq: NURS 401, 406 and 431 or NURS 350 and 431. Coreq: NURS 442 or instructor’s approval.

431 Community Health Nursing (6) Emphasizes care of client/client systems utilizing community health services in a variety of home and agency settings. Three hours lecture and six hours lab. Prereq: NURS 331 and 362 or NURS 350 or instructor approval. Coreq: NURS 401 and 406.

442 Leadership and Management in Nursing (5) Focuses on principles of management and leadership in delivery of health care. Emphasizes the professional nurse’s role as a client advocate and as a collaborative member of the health team. Two hours lecture and six hours lab. Prereq: NURS 401, 406 and 431 or NURS 350 and 431. Coreq: NURS 442 or instructor’s approval.

443 (643) Community Nutrition (4) Nutrition problems and services in the community. Government and industry sponsored programs. Applications of research methodology to socio-cultural and ethnic food consumption and trends in consumer issues. Observations and field experiences included. Prereq: NUTR 100 and FSCI 200.

455 (655) Nutrition Assessment and Counseling (3) Components of nutrition assessment, theories and practice in nutrition counseling and basics of nutritional support for hospitalized patients. Also includes exercises in the development of critical thinking skills as they apply to nutrition issues.

720 Human Nutrition (3) Physiologic functions of carbohydrates, proteins, fats, minerals and vitamins. Contemporary problems in meeting nutritional requirements. Prereq: NUTR 422.

723 Advanced Nutrition (3) Applications of research methods to individual problems. Prereq: CHEM 112 or equivalent.
724 Preprofessional Practice II (2) One-hundred-eighty hours of supervised practice plus 20 hours of lecture-discussion/independent study addressing the aspects of dietetic practice in community nutrition. This course consists of rotations in public health nutrition/WIC, child nutrition programs, nutrition education for the public, renal dialysis and community private practice. Prereq: Admission to Dietetic Internship and FSMG 714. Coreq: NUTR 764.

726 World Food Supply and Human Need (3) Food supplies and food practices as related to human nutrition throughout the world. Regional, national and international agencies concerned with food and nutrition problems. Prereq: Six (6) hours in nutrition or food science or consent of instructor.


734 Preprofessional Practice III (3) Two-hundred-eighty hours of supervised practice plus 40 hours of lecture-discussion/independent study addressing aspects of dietetic practice in clinical nutrition. This course consists of rotations in diet office operation, screening/nutritional assessment, gastrointestinal disorders, basic nutrition support and various medical-surgical rotations. Prereq: Admission to Dietetic Internship.

754 Preprofessional Practice V (3) Two-hundred-forty hours of supervised practice plus 80 hours of lecture-discussion/independent study addressing the aspects of nutrition intervention in dietetic practice. This course consists of rotations in developmental disabilities, rehabilitation, outpatient clinics, geriatrics, pediatrics, home health care, clinical management and critical care Prereq: Admission to Dietetic Internship, FSMG 714 and NUTR 734. Coreq: NUTR 724 and NUTR 764.

755 Nutrition in Mental Retardation and Developmental Disorders (3) Nutrition assessment, feeding skills, nutrient requirement and drug interaction. Joint teaching by nutrition faculty and Infant Stimulation staff.

764 Preprofessional Practice VI (1) One hundred hours of supervised practice plus 20 hours of lecture-discussion/independent study addressing the aspects of business and entrepreneurial dietetics practice. This course consists of rotations in entrepreneurial private practice and dietetics practice in business. Prereq: Admission to Dietetic Internship, FSMG 714 and NUTR 734. Coreq: NUTR 724.

Park and Recreation Administration (PRAD)

100 Fundamentals of Park and Recreation Administration (3) Historical development of recreation, leisure services and recreation resources. Philosophies of leisure, recreation and play. Survey of organized recreation delivery systems in public, non-profit, private and commercial settings. Career opportunities examined.

110 Park Management (3) Planning and organizing a park management program. Methods of maintaining and operating various park and recreation facilities in public and private settings. Includes design and scheduling personnel management and training preventive and/or corrective maintenance, law enforcement, vandalism control, fire protection, litter and garbage control.

200 Recreation Leadership and Programming (3) Presentation of the concepts, principles, practices and potentials of effective leadership and programming in recreation activities. Techniques of leadership and programming procedures for working with groups and individuals. Application of these techniques to given situations.

220 Outdoor Recreation (3) To develop a wide variety of certifiable skills in a number of outdoor activities such as orienteering, back-packing, camping, rappelling, canoeing, kayaking and problem solving. Weekend camping and canoeing trips required. Prereq: Must be a good swimmer.

300 Technological Applications in PRA (3) Application of the microcomputer technology to several course subject areas taught in PRA to include design, park management, recreation programming, financing, managing and marketing.
310 Recreation Area Design and Comprehensive Planning (3) Principles of planning, design and layout of recreation areas and facilities. Emphasis on site analysis and design of areas and facilities according to function, need, use and spatial arrangement. Special attention will be given to the study of recreation needs analysis for comprehensive recreation plans. Two one-hour lectures and one two-hour lab. Prereq: PRAD 300.

315 Special Event Management in PRA (3) Principles and techniques for planning, promoting, marketing and implementing special events in the park and recreation setting. Emphasis will be placed on the practical application of these techniques in special events on and off campus.

321 Landscape Management (3) Principles and techniques for maintenance of residential, commercial and institutional landscapes. Emphasis on landscape maintenance involving turf, flowers, ground covers, shrubs and trees. Discussion of maintenance of playgrounds, natural areas, trails, golf courses, pools and other public facilities. (Same as PLSC 321)

400 (600) Interpretation of Natural and Cultural Resources (3) Introduction to principles and techniques used to communicate natural and cultural history, ecological features and environmental awareness to park visitors. Methods of gathering, analysis and presentation of information. Planning construction and use of audiovisual equipment, exhibits and related interpretive devices. Students are required to write reports and give oral presentations. Two one-hour lectures and one two-hour lab.

410 (610) Financing, Managing and Marketing Recreation Services (3) Study of financial resources, legal aspects, organization, budgeting and management of recreation programs. Marketing of recreation products and services.

430 Supervised Field Experience (3-12) Supervised study in an operational setting with an approved agency. Emphasis on application of principles of park and recreation administration and of selected aspects of park management and preparation of a comprehensive analysis of a specific problem. Joint evaluation by on-the-job and academic supervisors. Prereq: Senior standing and instructor’s approval.

760 Management of Interpretive Resources (3) Principles of interpretation and an examination of the resources used for interpretive services. There will be an overview of the application of management principles to interpretive services. Sociological concepts, relevant innovations, resource inventory and master planning will be explored. Emphasis will be placed on the role of interpretation to accomplish an organization’s mission. (Same as NRM 760)

765 Conservation and Preservation of Historic Structures (3) Principles and methods related to the use, preservation and interpretation of historic structures. This will include the application of technology for the identification and cataloging of structures that have historical significance. Relevant laws and regulations will be reviewed. Special attention will be given to construction methods and materials as they apply to preservation. (Same of NRM 765)

770 Topics in Park and Recreation Administration (1-6) Topics in selected areas of park and recreation administration. For graduate students in the Master of Science in Agriculture and Natural Resources Systems Management program. Can be used to meet requirements in the MSANR curriculum.

Philosophy (PHIL)

110 The Adventure of Ideas (3) The living heritage of philosophy. An introductory study of the philosophical quest for understanding and wisdom from Socrates to Kant. A study of classical Greek, Biblical, medieval, Buddhist, scientific and early modern thought.

120 The Adventure of Ideas (3) (TBR: PHIL 1030) Living issues in current philosophy. An introductory study of the philosophical quest for understanding and wisdom in modern, contemporary and recent thought. A study of perspectives in the nineteenth and twentieth centuries and at the dawn of the twenty-first century.

130 Ethics and Race (3) An introductory course which explores the morality of race relations in America, from the points of view of secular and religious value systems. The goal of the course is the enhancement of understanding and philosophical rigor in matters of values among races.
160 Introduction to Ethics (3) A study of basic issues in ethics. Action-centered vs. agent-centered theories, the idea of virtue and aspects of moral psychology may be discussed. Applications to a selection of issues in applied ethics (e.g., medical and environmental ethics).

210 Elementary Logic (3) An analysis of the fundamental logical categories and skills which are needed for academic studies and the ordering of life's experiences: meaning, informal fallacies, tests of truth, rules of evidence, types of language, inference, argument and methodology (scientific and otherwise).

301 Major Religions of the World (3) A survey of the history and philosophy of major living religions: Hinduism, Jainism, Buddhism, Confucianism, Taoism, Zoroastrianism, Judaism, Christianity and Islam. (Same as RLST 301)

310 Aesthetics (3) A basic course in aesthetics, dealing with such conceptual issues as the criteria of identity for works of art, the idea of style, of expression, the notion of aesthetic attitude, the relevance of artists' intentions to interpretation and truth in literature and the arts. Analysis of these and similar notions with reference to examples from various art forms (painting, music, literature, etc.). Written reports and oral presentations are required. (Same as FA 310)

314 History of Ancient and Medieval Philosophy (3) A survey of philosophy from its beginnings through the medieval period; pre-Socratics, sophists, Plato, Aristotle, Hellenistic philosophy, selected major medieval figures (Augustine, Aquinas and some Arabic and/or Jewish figures).

315 History of Modern Philosophy (3) An examination of the leading philosophical ideas of the 16th, 17th and 18th centuries; the scientific revolution, Descartes, Spinoza, Liebniz, Locke, Berkeley, Hume and Kant.

320 Traces of God (3) An analysis of the contemporary question of the existence and nature of God and the relevance to that question of experience, faith, revelation, mysticism, proofs, history, relationships and creativity. Also an exploration of the relation of God and the World in terms of creation/evolution, time/eternity and culture/values. Position paper required. (Same as RLST 320)

330 Love, Sexuality and Living (3) A contemporary study of relationships, particularly those of love, human sexuality, caring, authenticity, friendship, family, fellowship, creative living and appreciation/mmanipulation. Position paper required.

340 Death, Suffering and Evil (3) A study of the essential limits and boundary situations of life, particularly the dark shadows of death, suffering and evil. Special attention given to an investigation of the possible meaningfulness of these limits and their value for authentic life. Other considerations include: suicide, abortion, war, crime, punishment, illness, insanity, perversion, inequality, waste. Position paper required. (Same as RLST 340)

350 Principles of Bioethics (3) Introduction to the ethical principles of paternalism, utilitarianism, autonomy, nonmaleficence, beneficence and justice and application of those principles to problem areas in the allocation of medical resources, genetic counseling, human experimentation and other areas of medical science.

360 Symbolic Logic (3) A first course in symbolic logic designed to introduce students to the idea of a logistical system, the propositional calculus, the predicate calculus with identity, functions, decidability and completeness. Prereq: PHIL 210 or equivalent, or instructor's approval.

370 God and Human Happiness (3) Studies in selected philosophers, religious thinkers and religious texts where a primary concern is the nature of human happiness and its relationships to beliefs about God or the ultimately real. Texts may include works from such philosophers as Plato or Nietzsche, such authors as Tolstoy or O'Connor and such texts as the New Testament or the Bhagavad Gita. Issues may include the relative importance of moral or non-moral goodness for happiness, the nature of God or ultimate reality as it bears upon human life and destiny and related issues. Position paper required. (Same as RLST 370)

380 Topics in the Philosophy and History of Religion [Selected Topics] (3) Intensive coverage of issues in the philosophy of religion (such
as the theistic attributes, theistic proofs, religious language) or in the history of religion (such as non-Western religious traditions, eras of reform, the history of interpretation). Course may be repeated with total credits not to exceed six hours. (Same as RIST 380)

385 Topics in the History of Philosophy [Selected Topics] (3) Intensive coverage of individual philosophers or of periods only surveyed or not covered in PHIL 314 and 315, such as 19th and 20th century philosophy. Course may be repeated with total credits not to exceed six hours.

395 Philosophy and Film (3) An examination of philosophical elements in film. The course will focus on how these media confront traditional philosophical questions about such issues as good and evil, the existence of God, the possibility of knowledge of self and the real, the nature of time. The ways in which the structure of these media themselves raise philosophical questions may also be addressed. Students will be required to attend out of class screenings of assigned films.

410 Political and Legal Philosophy (3) An examination of classic and recent discussions of the foundations of society and of conceptions of justice and law. Topics may include classical theories of the state, theories of natural law, 20th century discussions of law and liberty, legal idealism, legal realism and positivism, law and the social sciences and critical legal studies. Some focus on court decisions as illustrative of philosophical assumptions in legal reasoning.

430 (630) Science and Human Values (3) An examination of the philosophical foundations of the scientific enterprise with particular emphasis on the social/value implications of the natural, biological, social and behavioral sciences. (Same as PSYC 430)

440 Topics in African-American and Feminist Studies (3) An examination of the status of African Americans, including a focus on such matters as economic, social, political and educational status. An exploration of the global status of women and the effects on women of major social institutions.

450 Existentialism and Phenomenology (3) Studies in selected contemporary existentialist philosophers and phenomenologists: Kierkegaard, Nietzsche, Husserl, Sartre, Heidegger, Marcel and Jaspers. Existentialism’s dominant themes, its historical and social origins, its use of the phenomenological method and its current impact on thought and culture are considered.

460 Contemporary Metaphysics and Epistemology (3) Survey of contemporary discussions in metaphysics and epistemology. Issues include idealism, materialism, dualism, realism, theories of knowledge, theories of truth, epistemological skepticism.

470 Internship in Race Relations (3) Experience with local, state, national, and international authorities in matters of race relations. Internship is under the supervision of faculty. Course performance is based on an agreement between student and instructor which stipulates specific academic and work assignments. Prereq: Approval of instructor and either PHIL 130 or 440.

490 (690) Topics in Philosophy [Selected Topics] (3) Studies in selected issues in metaphysics, epistemology, ethics, aesthetics and philosophy of science, such as philosophy of mind, theories of truth, cognitive relativism, concepts of virtues, literary theory and the like, with each seminar devoted to one such topic. Course may be repeated with total credits not to exceed six hours.

Physical Activity (PACT)

A student may elect a maximum of eight semester hours credit within the service (activity) program to count toward graduation. ONLY two service (activity) courses may be taken during any given semester.

Any service course may be taken either for a letter grade or for Pass/Fail. If the Pass/Fail option is chosen, this option must be declared in writing before the end of the course adjustment period.

112 Scuba I-Open Water (3) Laws of physics that relate to diving, medical aspects of diving, decompression and recompression, aquatic environment and basic rescue techniques Certification: PADI. To be certified, a student must complete a weekend practical exercise at a dive location. Prereq: Instructor’s approval. May not be repeated for credit.
113 Scuba II-Advanced Scuba and Rescue (3) Comprehensive study of factors involved in open water diving including the safety factors associated with night diving, search and recovery, compass navigation and natural navigation. Certification: PADI. To be certified, a student must complete a weekend exercise at a dive location. Prereq: Instructor’s approval and PACT 112. May not be repeated for credit.

114 Scuba III-Dive Master (3) Knowledge, skill and safety factors involved in conducting underwater tours and dive trips for groups. First aid and CPR training for diving accidents, emergency entry and retrieval of divers from the water. Certification: PADI. To be certified, a student must complete a weekend practical exercise at a dive location. Prereq: PACT 113 and instructor’s approval. May not be repeated for credit.

115 Swimming (2) For all students at the beginning non-swimmer levels. A proficiency test administered the first day of class. One hour lecture and two one-hour labs. May be repeated for credit.

116 Lifeguard Training (2) Skills and knowledge necessary for American Red Cross Lifeguard Certificate. One hour lecture and two one-hour labs. May be repeated for credit.

117 Water Safety Instructor (2) Skills and knowledge necessary for American Red Cross Water Safety Instructor Certificate. One hour lecture and two one-hour labs. May not be repeated for credit.

118 Judo I (2) Beginning judo. Course emphasizes physical and mental skills utilized in the judo training. May be repeated for credit.

119 Martial Arts I (2) Beginning martial arts. Course emphasizes physical and mental skills utilized in the martial arts. One hour lecture and two one-hour labs. May not be repeated for credit.

120 Martial Arts II (2) Intermediate and advanced martial arts skill development. May be repeated for credit. One hour lecture and two one-hour labs.

121 Marksmanship/Weapons (2) Instruction in the history of weapons, firearms, safety, various types of military weapons. Basic rifle marksmanship including the various types of firing positions, federal and state firearm laws and the U.S Army Qualification Course with the M16 rifle. Freshman and sophomores are encouraged to participate because of their eligibility as it relates to possible ROTC financial benefits. Four hours lecture/lab. May not be repeated for credit.

122 Aerobic Walking/Jogging (2) A course designed to promote health and longevity. Emphasis on the development of an individual walking or jogging program as an aerobic activity to promote cardiovascular endurance and flexibility. Emphasis on body composition and diet. May be repeated for credit. One hour lecture and two one-hour labs.

123 Hydrorobics (2) A vital program for health and longevity emphasizing cardiovascular endurance, flexibility, body composition and diet control. An aerobic fitness opportunity for students who cannot participate in traditional aerobic activities due to physical limitations. May be repeated for credit. One hour lecture and two one-hour labs.

124 Rhythmic Aerobics (2) A program of vigorous choreographed movements and steps to music designed to improve or maintain cardiovascular endurance, agility, flexibility, balance, strength, rhythm and coordination. May be repeated for credit. One hour lecture and two one-hour labs.

125 Weight Training (2) Instruction in the safe performance of a variety of resistance training exercises and programs. Emphasis on development of proper training techniques and understanding of fitness training principles for meeting individual fitness goals. May be repeated for credit.

126 Archery (2) Development and refinement of the skills of archery. Emphasis on aiming techniques, safety, rules, equipment and tournament competition. One hour lecture and two one-hour labs. May be repeated for credit.

127 Advanced Archery (2) Development of knowledge and skills used for hunting and competitive target shooting. May be repeated for credit. One hour lecture and two one-hour labs.

128 Badminton (2) Development of the skills and strategies of badminton. Emphasis on rules, safety and sportsmanship necessary to play both competi-
129 Advanced Judo (2) Course develops the knowledge and skills required for advanced competence in Judo. Training emphasizes falling, throwing, mat and sparring techniques. Prereq: PACT 118 or instructor's approval. May be repeated for credit.

130 Hapkido (2) Course teaches the basic skills and knowledge of self-defense. Combines the elements of Karate, Judo and other self-defense disciplines and prepares the student for advanced study of Hapkido. May be repeated for credit.

131 Women's Self-Defense (2) This class is designed to provide instruction relative to awareness of potentially dangerous situations. It will also provide the students with the opportunity to learn basic self-defense skills in the event there is an attack. May not be repeated for credit.

132 Advanced Women's Self-Defense (2) The class is designed to provide continued instruction relative to awareness of potentially dangerous situations encountered on a daily basis. It will provide the student the opportunity to develop intermediate and advanced self-defense skills. May be repeated for credit.

133 Tai Chi (2) Meditation, exercise and stretching and self-defense techniques with emphasis on Tai Chi Chuan Form. This course also includes an introduction to Tai Chi history, types and characteristics. May be repeated for credit.

134 Yoga/Stretching Techniques (2) The practice of yoga techniques has been shown to increase strength and flexibility. In this course students will learn to perform several basic yoga poses as well as breathing techniques to calm, relax and reduce stress. Instruction according to Hatha Style, Iyengar yoga and Paranayama breathing. May be repeated for credit.

135 Golf (2) Development of the skills of golf. Emphasis on rules, safety and sportsmanship. Opportunities to practice at various golf courses. May be repeated for credit.

136 Intermediate Golf (2) To provide the student with an overview and understanding of golf rules, safety and sportsmanship. Opportunities to practice at various golf courses. May be repeated for credit.

138 Country/Western and Line Dancing (2) This course teaches the basic steps for a variety of dances performed to popular music. Dances will include steps done solo, with partners and in small groups. May be repeated for credit.

140 Tumbling and Gymnastics (2) Development of skills and safety in tumbling and gymnastics. Instruction for students with no previous background. One hour and two one-hour labs. May not be repeated for credit.

141 Ballroom/Swing Dance (2) This course is designed to teach the beginning dancer how to perform basic ballroom dance steps. Dances that will be taught include the foxtrot, tango, waltz, cha-cha, rumba, two-step and the east and west coast swing. May be repeated for credit.

142 Intermediate Gymnastics (2) Development of skills and safety in the different gymnastic events for men and women. Beginning instruction at intermediate levels of difficulty. One hour and two one-hour labs. Prereq: PACT 140 or instructor's approval. May not be repeated for credit.

143 Gymnastics for Cheerleading (2) Techniques and skills applicable to cheerleading, including crowd communications, motivation and control, tumbling, partner stunts, jumps and pyramid building. An extension of the UT Martin Cheerleading Scholarship Program. Scholarship recipients take course fall semester only. One hour and two one-hour labs. Prereq: Scholarship recipient or instructor's approval. May not be repeated for credit.

145 CardioKickboxing (2) In this course students will learn and execute stances, hand techniques and leg techniques that boxers and kickboxers use in training. These techniques will be coordinated with music to tone, lose weight, build self-esteem, increase flexibility and relieve stress. May be repeated for credit.

146 Cardio Fitness (2) Designed to promote health and longevity. Emphasizes the development of individual fitness program to promote cardiovascular endurance, body composition and diet. This course may be repeated for credit.
147 Boxercise (2) Non-combative instruction in the use of Olympic-style boxing for circuit training. Emphasis on proper punching techniques, footwork and exercise for muscular strength and cardiovascular endurance. May be repeated for credit.

148 Pilates (2) Instruction in mind-body exercises for the improvement of body awareness, posture, core strength and flexibility. Emphasizes proper breathing, body alignment and smooth movement techniques. May be repeated for credit.

150 Pickleball and Paddle Tennis (2) Development of the skills and strategies of pickleball and paddle tennis. Emphasis on rules, strategies, safety and sportsmanship necessary to play both competitively and recreationally. One hour and two one-hour labs. May be repeated for credit.

152 Snowskiing/Snowboarding (2) Provides instruction in skiing and snowboarding for all ski levels from novice to advanced performers. In addition to providing instruction in skiing and snowboarding techniques, the course addresses safety considerations and the selection and fitting of equipment. Accompanying the formal instruction appropriate to the skill level will be free time opportunities for practice. This course is conducted at a ski resort during the break between fall and spring semesters. An additional fee is required to cover the expense of the trip. May be repeated for credit.

155 Racquetball (2) Development of the skills of racquetball. Emphasis on rules, strategies, safety and sportsmanship necessary to play both competitively and recreationally. One hour lecture and two one-hour labs. May be repeated for credit.

160 Tennis (2) Development of the skills of tennis. Emphasis on rules, strategies, safety and sportsmanship involved in playing both competitively and recreationally. One hour lecture and two one-hour labs. May be repeated for credit.

161 Intermediate Tennis (2) Focus on match play strategy for the intermediate performer in singles and doubles. One hour lecture and two one-hour labs. Prereq: PACT 160 or instructor’s approval. May be repeated for credit.

165 Backpacking/Geocaching (2) This course addresses the fundamentals of backpacking and geocaching, including safety and proper use of equipment such as GPS devices. The student will gain actual experience on mandatory field trips. May be repeated for credit.

170 Special Topics in Physical Education (1-3) Selected topics. No more than six hours topics credit may be applied to an undergraduate degree in education. Prereq: Instructor’s approval.

175 Volleyball (2) Development of the skills of volleyball. Emphasis on rules, strategies, safety and sportsmanship necessary to play both competitively and recreationally. One hour lecture and two one-hour labs. May be repeated for credit.

180 Intermediate Basketball (2) Development of the intermediate skills of basketball. Emphasis on rules, strategies, safety and sportsmanship necessary to play both competitively and recreationally. One hour lecture and two one-hour labs. May be repeated for credit.

182 Flag Football (2) Development of the basic skills requisite to flag football. Emphasis on rules, strategies, safety and sportsmanship involved in playing both competitively and recreationally. May be repeated for credit.

185 Physical Fitness Training (2) This course is designed to provide the student with the opportunity to participate in a structured physical fitness routine. Components include flexibility, muscular strength and endurance and cardiovascular training. Can be repeated for credit and will provide exposure to Army ROTC procedures and opportunities. Freshmen and sophomores are encouraged to participate because of their eligibility as it relates to possible ROTC financial benefits.

190 Softball (2) Development of the skills of softball. Emphasis on rules, strategies, safety and sportsmanship necessary to play both competitively and recreationally. One hour lecture and two one-hour labs. May be repeated for credit.

195 Varsity Athletics (2) Participation in the development of high level skill strategies and techniques utilized in a selected varsity sport that is nationally sanctioned for intercollegiate competition and an approved sport in the athletic program at UT Martin. May be repeated for credit.
Physics (PHYS)

101 Physics in Everyday Life (4) A conceptual, inquiry-based course for students with non-science majors. This course examines familiar objects of everyday experience and leads to an understanding of physical principles that make them work. Topics include motion, forces, energy, fluids and waves. May not be taken for credit by students who have completed a higher number course in physics. This course is taught with an integrated lab and lecture. Students should not attempt PHYS 101 unless the results of Mathematics testing indicate placement in a college level mathematics course.

102 Physics in Everyday Life (4) A conceptual, inquiry-based course for students with non-science majors. This course examines familiar objects of everyday experience and leads to an understanding of physical principles that make them work. Topics include light, electricity, electromagnetism and modern physics. May not be taken for credit by students who have completed a higher number course in physics. This course is taught with an integrated lab and lecture. Students should not attempt PHYS 102 unless the results of Mathematics testing indicate placement in a college level mathematics course.

111 Concepts and Problem Solving in Physics (3) A course stressing introductory concepts and problem solving techniques in physics. Intended for students who have not had high school physics. May not be taken for credit by a student who has successfully completed a higher numbered course in Physics. Prereq/Coreq: MATH 140.

150 Concepts and Demonstrations in Physics (4) A first course in physics primarily designed for modeling instructional activities in physics. The course stresses fundamental physics concepts with demonstration experiments and activities. The course is taught with an integrated lab and lecture.

211-212 College Physics (4, 4) (TBR: PHYS 2010-2020) A non-calculus introduction to the basic principles of physics. 211: mechanics, elasticity, fluids, wave motion, sound and heat. 212: electricity, magnetism, light, optics and modern physics. Must be taken in sequence. Three hours lecture and two hours lab. Prereq: MATH 140 or equivalent.

220 University Physics (4) (TBR: PHYS 2110) A calculus-based introduction to the basic principles of physics. Topics include mechanics, elasticity, oscillatory motion, wave motion, sound, fluids and thermodynamics. Three hours of lecture and two hours of lab. Prereq: MATH 251.

221 University Physics (4) (TBR: PHYS 2120) A continuation of the calculus-based introduction to the basic principles of physics. Topics include: electricity, magnetism, basic circuits, geometrical optics and physical optics. Three hours of lecture and two hours of lab. Prereq: PHYS 220 and MATH 252.

322 University Physics (3) A continuation of the calculus-based introduction to the basic principles of physics. Topics include: fluids, waves, thermodynamics and optics. Prereq: PHYS 221.

323 University Physics (3) A continuation of the calculus-based introduction to the basic principles of physics. Topics include: relativity, radioactivity, nuclear structure, basic quantum mechanics, atomic structure and solid state physics with applications to lasers and semiconductors and elementary particles. Prereq: PHYS 322 or consent of instructor.

331-332 (531-532) Mechanics (3, 3) Kinematics and dynamics of point particles and rigid bodies. 331: vector calculus applied to motion of point particles including orbits, harmonic motion, motion of constrained particle. 332: special relativity (four-vectors), motion of rigid bodies, symmetric top, physical pendulum, elastic solids. An introduction to Lagrangian and Hamiltonian formulations. Must be taken in sequence. Prereq: PHYS 220 or 211 and instructor’s approval.

343 Methods in Physics Research (3) An introduction to experimental and theoretical methods in physics research. Topics include: instrumentation, data acquisition and analysis and mathematical and computational methods. Prereq: PHYS 221.

441-442 (641-642) Electricity and Magnetism (3, 3) 441: a quantitative study of electric and magnetic fields and their interaction with matter; culminates in the formulation of Maxwell's equations. 442: application of Maxwell's equations to the generation and propagation of electromagnetic waves through free space and matter. Must be taken in sequence. Prereq: PHYS 221 or PHYS 212 and instructor’s approval.
471-472 (671-672) Modern Physics (3, 3) An introduction to quantum mechanics with application to atomic structure, solid state and nuclear physics. Must be taken in sequence. Prereq: PHYS 222 or 212 and instructor's approval.

491-492 (691-692) Special Projects in Physics (1-3, 1-3) Research projects or special topics under the active supervision of a faculty member. Prereq: Junior standing and instructor's approval.

Plant Science (PLSC)


119 Introductory Plant and Soil Science Laboratory (1) Provides lab experience on basic concepts of plant structure, physiology, growth and propagation. Includes plant-soil relationships. One two-hour lab. Coreq: PLSC 110.

205 Introduction to Pesticides (3) Manufacture, regulation, marketing and use of pesticides. Structure, mode of action, toxicity, degradation, safety and environmental impact of pesticides commonly used. Biological, chemical and non-chemical approaches and their effectiveness in controlling pests. This course serves as preparation for materials covered on the Pesticide Applicators certification exam. Opportunity will be given to take the Certified Pesticide Applicators exam at the end of the semester if the student desires to become certified. Prereq: Two semesters of biological science.

234 Lawn and Turf Management (3) Principles and practices of identifying, establishing and maintaining lawns and turfs in the landscape for public and private agencies. Two one-hour lectures and one two-hour lab.

242 Fundamentals of Horticulture (3) Horticulture industry and its contribution to world economy; theoretical and practical aspects of plant growth and development; principles and techniques of plant propagation; pruning and control of growth. Application and use of plant growth regulators in horticulture. Production, storage, processing and marketing of horticultural plants and products. Two one-hour lectures and one two-hour lab.

250 Crop Evaluation (1) Intensive study involving identification and evaluation of agronomically important crops. Includes seed and plant identification along with grain grading. Course culminates in participation in national contest. May be repeated. Maximum of four hours Prereq: Consent of instructor.

260 Landscape Equipment and Technology (3) Course will introduce students to equipment and technologies used in landscape maintenance and construction. Course will emphasize appropriate uses, equipment maintenance scheduling and safety.

301-302 Special Problems (1, 1) Individual projects for students exhibiting special interests and abilities in soils or in breeding, propagation, or production of agronomic or horticultural plants. Maximum of one hour applicable to concentration requirements. Written project outline and report of results required. Taught only by arrangement prior to registration. Prereq: Eight hours of study suitable to the problem.

321 Landscape Management (3) Principles and techniques for maintenance of residential, commercial and institutional landscapes. Emphasis on landscape maintenance involving turf, flowers, ground covers, shrubs and trees. Discussion of maintenance of playgrounds, natural areas, trails, golf courses, pools and other public facilities. (Same as PRAD 321)

322 Introductory Plant Pathology (3) Introduction to basic principles of plant pathology. Diagnosis, cause and control methods of major plant diseases. Major emphasis on agronomic crops. Students are required to write reports and give oral presentations. Two one-hour Lectures and one two-hour lab. Prereq: Two semesters biological science.

324 Landscape Construction Techniques (3) An introduction to the landscape construction and contracting industry; a survey of landscape construction materials and methods with emphasis on grading, drainage, wooden structures, cost-estimation and construction document preparation. Practical
experience will be provided through implementation of small-scale landscape development projects. Two one-hour lectures and one two-hour lab.


**341 Dendrology and Forest Ecology** (3) The production, identification, management and utilization of important forest trees of the United States, emphasizing native hardwood species common to Tennessee. Two hours lecture and one three-hour lab.

**342 Fruit and Vegetable Production** (3) Distribution, economic importance and characteristics of important fruit and vegetable crops. Adaptation, culture and management requirements. Disease and insect problems and controls. Harvesting and marketing systems. Commercial utilization. Students are required to write reports and give oral presentations.

**345 Fruit and Vegetable Products** (3) Basic principles and practices utilized in handling, processing and storage of fruit and vegetable products. Emphasis placed on current technical and applied information. Field trip required. Two one-hour lectures and one two-hour lab.

**363 Plant Identification and Propagation** (3) Principles and techniques for identifying and propagating native and exotic ornamental plants utilized for functional and aesthetic purposes in residential, recreational and public grounds improvement.

**365 Greenhouse Crops and Management** (3) Identification, propagation production and post-harvest physiology of floral, indoor and ornamental plants. Operation of greenhouses emphasizing state-of-art technologies and management.

**401-402 (601-602) Research Participation** (3, 3) Application of the scientific method and techniques of research to solution of problems for students exhibiting special interest and abilities in investigative work in soil or plant sciences. Maximum of three hours applicable to concentration requirements. Presentation of written project outline and written and oral reports required. Taught only by arrangement prior to registration. *Prereq: Senior standing and minimum GPA of 2.75.*

**410 (610) Nonindustrial Private Forestry** (3) Principles of forestry and management of small private tracts of forestland. Multiple uses of these forests and how to market and harvest products from them. How to protect them, improve their quality and keep records. (Same as NRM 410/610.)

**422 (642) Forage Crops** (3) Characteristics, distribution and economic importance of forages. Culture, management and utilization of grasses and legumes in forage-livestock systems. Factors affecting forage quality and utilization by ruminant livestock. Students are required to write reports and give oral presentations. Two one-hour lectures and one two-hour lab. *Prereq: PLSC 110, ANSC 110.*


**433 (633) Field Crop Production** (3) World distribution, economic importance and growth characteristics. Cultural and management requirements, pest problems and control. Harvesting marketing and utilization of major field crops. Two one-hour lectures and one two-hour lab. *Prereq: SOIL 210.*

**442 (642) Crop Adaptation and Ecology** (3) Influence of environmental factors and cultural practices on plant growth responses, adaptation and distribution. Study of plant community structure, competitive interactions and their relationship to cycling of energy, nutrients and water in agricultural ecosystems. Two one-hour lectures and one two-hour lab. *Prereq: Two semesters of biological science, PLSC 110.*
445 Plants, Environment and Design (3)
Principles of plant composition and theory of plants in design with emphasis on historical and contemporary approaches to planting design. Understanding the functional abilities of plants in altering the environment with emphasis on architectural, engineering, aesthetics and climatological uses of plants. Plant characteristics, requirements and selection for use in natural and man-made environments with reference to soils, topography, climate, as well as, maintenance issues. Two one-hour lectures and one two-hour lab. Prereq: PLSC 242 and 462.

462 Environmental Landscape Design (3)
Theory and principles of landscape design with special emphasis on consideration of environmental factors affecting and affected by the landscape design. Form, structure and function along with visual appeal will also serve as the basis for designing landscapes. Economics of design and long-term project maintenance will also be addressed.

471 Golf Course Management (3)
Establishment and management of special purpose grasses for golf courses, greens, fairways and the rough areas. Two one-hour lectures and one two-hour lab. Prereq: PLSC 234 or PLSC 242 or consent of instructor.

475 (675) Grazing Management Techniques
(3) Principles of forage crop growth, pasture soil characteristics, livestock grazing behavior and pasture utilization through grazing. Methods of designing intensive pasture utilization systems. For graduate credit students are required to complete a capstone grazing system design utilizing concepts developed in the course.

722 Production of Biorenewable Resources
(3) An exploration of plant species with potential as crops for industrial uses including biofuels. An overview of the chemistry of plant products and extraction techniques for useful products including biofuels, unique fatty acids and pharmaceuticals from new and existing crops. Will include a review of fundamental concepts in bioenergy and biobased products including engineering thermodynamics and organic chemistry. (Same as NRM 722)

724 Advanced Grazing Management Techniques
(3) An in depth discussion of the integral biological and physical components of pasture systems. Students will learn how soil chemical and physical properties interact with plant growth in the production of forage crops. The focus of the course will be to examine the impact of management practices on the ecology of grazing livestock in pasture systems. Students will evaluate grazing systems and develop a management plan as a part of the course activities. A paper dealing with pasture ecology will be a required component of the course. (Same as NRM 724)

Political Science (POSC)

210-220 American Government and Politics
(3, 3) A survey of the origins, structure and functions of the political system in the United States on the national, state and local levels. 210: Development of American constitutionalism, federalism and intergovernmental relations, parties, interest groups, elections, civil rights and civil liberties. 220: The executive, legislative and judicial branches at national, state and local levels. Domestic policies, budgetary processes, defense and foreign policy issues.

303 Scope and Methods of Political Science
(3) An examination of the basic theories, concepts and methods of modern political analysis and the application of various research techniques. Significant writing and oral presentations required. Open only to political science majors and minors with at least junior standing.

312 Politics and Government of Tennessee
(3) An examination of Tennessee government and politics, including the state constitution, the three branches of government, political affairs, political issues and local government.

314 Intergovernmental Relations
(3) An in-depth examination of the historical evolution, growth and contemporary status of fiscal political and legal relationships between the national, state and local governments. The course emphasizes federal policy and financing of state and local governments within the context of grants-in-aid programs.

321-322 International Relations
(3, 3) Principles of theory and practice of international politics. Fundamentals of national power study, diplomacy, foreign policy, as well as the social, cultural, legal...
and economic aspects of relations among nations. Discussion on several major current international problems each semester.

333 The President and Congress (3) An examination of the structure, roles, powers and functions of the Presidency and Congress. Review of the interactions between the executive and legislative branches with regard to law making, the budgetary process, policy development and implementation, military and foreign policy and other areas of constitutional responsibility.

341 Survey of Comparative Politics (3) A survey of the institutions, processes and policies of various political systems throughout the world from a comparative perspective.

353 Administrative Law (3) A study of the role of government agencies in the legal process. Review of the problems associated with administrative rule-making and the enforcement methods and extent of checking public agencies.

361 Introduction to Public Administration (3) A study of bureaucracy in the United States. Emphasis on the environment of public administration, management of programs and human behavior in organizations.

362 Introduction to Public Policy (3) A study of the process and substance of contemporary public policies in the nation and states.

363 Public Budgeting and Personnel Management (3) A study of two of the fundamental functions of modern public administration. The first portion of the course focuses on the various approaches used in formulating budgets for local, state and national governments, with an emphasis on viewing the budget as reflecting goals of public policy. The second portion of the course provides a survey of the unique legal demands of human resource management in the private sector.

381 Political Parties and Elections (3) The rise of political parties in America, major stages in their development, their organizational structures and their impact on the American political process. The evolution of voting rights in America, general rules governing the election process, types of elections and findings on voting behavior.

382 Public Opinion and Interest Groups (3) A study of the roles that interest groups and public opinion play in American political life. Review of the measurement of public opinion, the importance of various factors in the formulation of opinions, the articulation of public opinion through interest groups and interest groups’ methods of operations and financing.


391 Paralegal Studies: Legal Terminology and Writing (3) An introduction to the legal language and the style of legal writing commonly used legal terms, writing of law office and trial memoranda, trial court briefs, appellate briefs and the abstracting of depositions. Prereq: POSC 210-220 or instructor’s approval.

392 Paralegal Studies: Legal Research (3) An introductory overview of the legal research process, both civil and criminal. Introduces students to major legal research sources and seeks to develop their proficiency in utilization of various legal indexing systems. Prereq: POSC 210-220 or instructor’s approval.

393 Paralegal Studies Internship in Paralegalism (3) Purpose is to familiarize the student with various day-to-day aspects of the legal system or a law office by placing the paralegal in a law office or legally-related agency for one semester on a part-time basis. Prereq: POSC 391, 392 and department chair’s approval.

401 (601) Political Theory (3) A review of major political ideas through a systematic study of key philosophers from ancient Greece to the present.

431-432 American Constitutional Law (3, 3) 431: Civil Liberties. Traditional and newly-emerging issues of civil liberties in such areas as free speech, church-state relations and freedom of the press. 432: Civil Rights. The constitutional rights of certain groups in American society, especially minorities and women.
451 (651) The Judicial Process (3) A study of federal and state court structures and their environments with emphasis on the role that each level of court plays in the American legal system. The staffing of the courts and the process of judicial decision-making.

Political Science, Independent Study, Internships, Research, Travel-Study and Topics Courses

400 (600) Independent Study (3) Directed readings and discussions of selected topics in political science. Subject to be selected by student in consultation with instructor. Open only to majors or minors of at least Junior standing. Maximum of three credit hours allowed. By permission of Political Science faculty only.

410 Political Science Internship (3-9) Designed to offer experience in governmental service under direction of faculty members and field supervisors. Amount of credit granted depends upon nature of projects undertaken. Course may be repeated up to maximum of nine hours under course number Note: Only 6 hours of POSC 410 may count toward a major; only 12 hours of combined credit in POSC 400, 410 and 467 can count toward a major. Students cannot receive credit in both POSC 410 and POSC 420. Prereq: POSC 210-220 unless waived by department chair.

420 Public Administration Internship (3-12) To gain experience in governmental service for public administration concentration. Service position may or may not be compensated. Course performance based on an agreement between student and academic adviser which stipulates specific academic and work assignments. Students may elect a Pass/Fail option. In all cases, grades will be based upon academic evaluation and work evaluation by on-the-job supervisors. Three hours required for Public Administration concentration, additional hours may be taken for elective credit only. Students cannot receive credit in both POSC 410 and POSC 420. Prereq: For public administration concentration only. Normally Senior standing and an overall GPA of at least 2.00.

467 (667) Travel-Study [Selected Topics] (1-3) A combination of travel, study and field observation in a geographic area away from campus under the supervision of a university instructor. May be taught as an organized study-tour or as an independent travel and study project. Topics, prerequisites and course requirements announced in advance. May be offered on a pass/fail basis. Requires instructor's approval. Students may repeat course with different topics. Not regularly offered.

480 (680) Topics in U.S. Political Science: [Topic Title] (3) Classes in one or more of the following areas: (a) interdisciplinary approaches to political issues and (b) specialized topics suitable for indepth study. May be repeated for credit (with different topic). Only six hours of undergraduate topics courses can be counted toward the major or minor. Not regularly offered.

490 (690) Topics in Non U.S. Political Science: [Topic Title] (3) Classes in one or more of the following areas: (a) interdisciplinary approaches to political issues and (b) specialized topics suitable for indepth study and (c) comparative or international issues not covered in regular classes. May be repeated for credit (with different topic). Only six hours of undergraduate topics courses can be counted toward the major or minor. Not regularly offered.

Portuguese (PORT)

111 Elementary Portuguese (4) An introductory course emphasizing listening, speaking, reading and writing. May be used to remove a language deficiency or for students with no prior experience in the language. Three one-hour lectures and two one-hour labs.

122 Elementary Portuguese (4) An introductory course emphasizing listening, speaking, reading and writing. Three one-hour lectures and two one-hour labs. Prereq: PORT 111 or the equivalent as determined by the department.

222 Intermediate Portuguese (4) Grammar review, reading, writing and conversation. Three one-hour lectures and two one-hour labs. Prereq: PORT 122 or equivalent as determined by the department.
230 Portuguese for Speakers of Spanish (4)
Intensive Portuguese language course with focus on listening, reading, speaking (special attention given to pronunciation), writing and culture. Course taught in Brazilian Portuguese. Advanced proficiency in Spanish required. Three one-hour lectures and two one-hour labs. Prereq: SPAN 222 or equivalent. Native speakers of Spanish are welcome.

341 Advanced Conversation (3) Emphasizes conversational skills. Oral practice to extend range of topics, vocabulary, fluency and conversational strategies. Study of the phonetic system of the Portuguese language and exercises to improve pronunciation. Grammar appropriate for oral Portuguese. Discussions utilizing reading and electronic media such as videos and the Internet. Prereq: PORT 222 or instructor’s approval.

Psychology (PSYC)

110 General Psychology (3) Introduction to the methods and findings in psychology with emphasis on the origins, research methods and goals of psychological science, biological foundations of behavior, sensation and perception, learning, memory and information processing, cognition, language, cognitive development and social and personality development.

120 General Psychology (3) Introduction to the methods and findings in psychology with emphasis on motivation and emotion, personality theories, psychological testing, psychopathology and therapy, attitudes and social perception, social relations, group influence and altered states of consciousness.

110H-120H Honors General Psychology (3, 3) Limited class size, extensive discussion, writing assignments and research projects are featured. Open to students who have demonstrated superior academic ability. Prereq: Departmental approval.

300 Introduction to Clinical Psychology (3) A survey of the science and practice of clinical psychology. Topics include a review of the historical roots of clinical psychology, issues of diagnosis and treatment of disorders, theoretical models of clinical assessment and intervention, professional and ethical issues. Prereq: PSYC 110-120.

310 Human Relations and Personal Adjustment (3) A study covering principles and practices of human relations skills in organizations and of personal adjustment in everyday life. Motivation and leadership, communication skills and transactional analysis, assertiveness, stress management and self-concept development.

311 Human Relations for Staff (3) A course covering principles and practices of human relations skills in organizations. Content of course aimed at administrators and staff in university settings. Motivation and leadership, communication skills and transactional analysis, assertiveness, stress management and self-concept development. Pass/Fail credit.

312 Social Psychology (3) A study of social influences on human behavior. Attitudes, conformity, prosocial and antisocial behavior, prejudice, interpersonal perception and attraction, leadership, persuasion and group dynamics. Lectures and readings are supplemented by measurement of social behavior in class projects. Writing requirements include essay examination questions and research papers. Prereq: Three hours general psychology or general sociology. (Same as SOC 312)

313 Developmental Psychology (3) A theoretical and empirical study of human cognitive, social and personality development. Primary emphasis on psychological growth and change in infancy, childhood and adolescence. Lectures and readings are supplemented by individual projects involving observation and measurement of behavior in natural settings. Writing requirements include essay examination questions and research papers. Prereq: PSYC 110.

315 Experimental Psychology I (4) An introduction to research methodology and statistics in the behavioral sciences. Topics will include a scientific overview, ethics, hypotheses, basic statistics, experimental design and SPSS. Students will complete several research papers in the publication format of the American Psychological Association. Essay examinations are given and speaking assignments are required. Three one-hour lectures and one one-hour lab. Prereq: PSYC 110-120.
318 Experimental Psychology II (4) A continuation of Experimental Psychology I in research methodology and statistics in the behavioral sciences. Topics will include calculating probability, correlation, SPSS, t-tests and ANOVA. Students will complete a comprehensive research project and several research assignments in the publication format of the American Psychological Association. Three one-hour lectures and one one-hour lab. Prereq: PSYC 110-120 and 315 with grade of C or better; MATH 140 or equivalent.

320 Learning and Cognition (4) A survey and critical analysis of theoretical issues, empirical findings and research methods in the psychology of learning and cognition. Coverage includes mechanisms of learning and how learned information is retained, processed and used in memory and other cognitive processes. Students conduct several lab research projects and write up the results in the publication format of the American Psychological Association. Three one-hour Lectures and one one-hour lab. Prereq: PSYC 315 and 318.

330 Applied Behavior Analysis (4) An in-depth view of the history, principles, procedures and clinical applications of techniques based on learning theory. The student will be expected to design, conduct and write up several behavioral-intervention projects involving children or adults. Three one-hour lectures and one one-hour practicum. Prereq: PSYC 315 and 318.

340 Industrial and Organizational Psychology (3) Psychology of employee selection, training, proficiency, evaluation, motivation, morale and reactions to working conditions. Speaking assignments are required. Prereq: PSYC 110-120.


360 Drugs and Behavior (3) Effects of recreational and therapeutic drugs on the brain and behavior. Coverage includes depressants (alcohol, barbiturates), stimulants (caffeine, nicotine, amphetamines, cocaine), narcotics (morphine, heroin, methadone), hallucinogens (LSD, PCP, marijuana), antipsychotics and antidepressants. A major component of the course includes understanding addiction and how it is treated.

365 Special Topics in Psychology (3) Selected topics in the area of psychology. The course subject matter will vary by semester; for example, psychology and law, health psychology, human sexuality, psychology and the media, neuropsychology, neuropsychological disorders in children, addictions counseling, psychology of aging, etc. Course may be repeated with total credits not to exceed six hours.

370 Psychology of Women (3) This course concerns psychological approaches to studying women. It examines relevant theory and research. Topics include identity and self-concept, relationships and power, sexuality, parenting, work, mental health and women of color. (Same as WMST 370)

445 Undergraduate Research Participation (3) Experience in active research projects involving supervision of staff members. By arrangement. Prereq: Junior or senior standing, minimum GPA of 3.00, instructor's approval.

450 Theories of Personality (3) A critical review of historical and contemporary personality theories. Psychoanalytic, constitutional, actualization and field-theoretical and learning-theory views. Prereq: PSYC 120 or instructor's approval.

470 Physiological Psychology (4) A systematic study of the nervous system and other physiological correlates of behavior. Three one-hour lectures and one one-hour lab. Prereq: PSYC 315 and 318.

475 History of Psychology (3) A comprehensive survey of the historical antecedents of modern psychology with emphasis on both scientific and philosophical origins. Essay examinations are given. Students write a comprehensive research paper. Prereq: Six hours upper-division psychology.
480 Senior Seminar (3) A detailed review of methods, content and issues in psychology. Active student participation, including oral presentation of papers. This course must be taken in the final semester. The areas covered on the final exam are: Abnormal, Animal Learning/Motivation, Developmental, Experimental Design, History and Systems, Human Learning/Cognition, Personality, Physiological, Social and Statistics. For psychology majors only.

490 Field Work in Psychology (1-3) Supervised field work placements available for students who want to explore career options in clinical or industrial psychology. Prereq: Junior or senior standing and instructor’s approval. Course may be repeated with total credits not to exceed six hours.

701 Directed Studies in Psychology (3) Directed study into the different subject matter areas of psychology.

Reading (READ)

100 The Strategic Dimension of Reading (3) A course designed to assist students in using strategies and skills to become life-long readers. Provides intensive practice in the strategic reading of a variety of college-level texts. Focus in this course is on reading strategies, critical thinking, experiences that foster an appreciation of reading and print information and encourage life-long reading.

111 Effective Reading (2) A small group experience designed for students interested in vocabulary improvement and comprehension in a variety of reading situations.

433 (633) Reading in the Content Area Classroom (3) A study of methods and materials that can be used in content area classrooms to improve vocabulary skills and comprehension and enhance content retention. Students will develop materials for use in their specific areas of content concentration. Prereq: Junior standing and a 2.5 cumulative GPA.

438 (638) Classroom Approaches to the Teaching of Reading in the Elementary School (3) A study of various approaches and techniques in the teaching of reading for children including informal identification, analysis and remediation of specific reading difficulties.

700 Foundations of Reading (3) An examination of various approaches and techniques in developmental reading. Emphasis will be on advanced methodology and its theoretical basis.

710 Advanced Reading Diagnosis and Corrective Reading (3) Study of advanced diagnostic procedures for children who exhibit severe reading difficulties, followed by instruction in techniques for planning and implementing improvement in identifying problem reading behavior. Prereq: READ 700 or equivalent.

720 Research Based Techniques for Teaching Reading and Language Arts (3) A study of research findings in teaching composition, English grammar, handwriting, listening, literature, spelling and application of new research to effective teaching of reading. Prereq: READ 700 or instructor’s approval.

730 Reading as a Psycholinguistic Process (3) The investigation of current developments in cognitive psychology and linguistics as they relate to understanding the reading act. Reading theories and models will be compared and evaluated. Prereq: READ 700.

740 Practicum in Reading (3) A field-based experience in a school setting with children who have reading problems, focusing on observation, diagnosis, planning and implementing programs designed to bring about improvement in reading behaviors. Prereq: READ 710.

Religious Studies (RLST)

201 Religion and Contemporary Culture (3) Contemporary science and literature considered in their impact upon the relevance for religion in the 20th century. A study of such concepts as human nature, alienation, commitment, illusion and hope.

301 Major Religions of the World (3) A survey of the history and philosophy of major living religions: Hinduism, Jainism, Buddhism, Confucianism, Taoism, Zoroastrianism, Judaism, Christianity and Islam. (Same as PHIL 301)

306 Religion and Society (3) Interrelationships of society, culture and religion. Prereq: SOC 201. (Same as ANTH 306 and SOC 306)
320 Traces of God (3) An analysis of the contemporary question of the existence and nature of God and the relevance to that question of experience, faith, revelation, mysticism, proofs, history, relationships and creativity. Also an exploration of the relation of God and the world in terms of creation/evolution, time/eternity and culture/values. Position paper required. (Same as PHIL 320)

340 Death, Suffering and Evil (3) A study of the essential limits and boundary situations of life, particularly the dark shadows of death, suffering and evil. Special attention given to an investigation of the possible meaningfulness of these limits and their value for authentic life. Other considerations include: suicide, abortion, war, crime, punishment, illness, insanity, perversion, inequality, waste. Position paper required. (Same as PHIL 340)


370 God and Human Happiness (3) Studies in selected philosophers, religious thinkers and religious texts where a primary concern is the nature of human happiness and its relationships to beliefs about God or the ultimately real. Texts may include works from such philosophers as Plato or Nietzsche, such authors as Tolstoy or O’Connor and such texts as the New Testament or the Bhagavad Gita. Issues may include the relative importance of moral or nonmoral goodness for happiness, the nature of God or ultimate reality as it bears upon human life and destiny and related issues. Position paper required. (Same as PHIL 370)

375 Church History (3) A general survey of the development of Christianity from apostolic times to the present. Examination of both western and eastern forms of Christianity, the development of beliefs, practices and institutions and Christianity’s interaction with society and culture.

380 Topics in the Philosophy and History of Religion [Selected Topics] (3) Intensive coverage of issues in the philosophy of religion (such as the theistic attributes, theistic proofs, religious language) or in the history of religion (such as non-Western religious traditions, eras of reform, the history of interpretation). Course may be repeated with total credits not to exceed six (6) hours. (Same as PHIL 380)

Secondary Education (SEDU)


412 (612) Instructional Strategies: Mathematics (3) Trends in teaching secondary school mathematics grades 7-12. Development of strategies, techniques, materials, planning skills and evaluation skills appropriate to the high school mathematics students. Directed experience in public schools. Prereq for 412: TCED 302 and admission to Teacher Education. Prereq for 612: TCED 780 and admission to Teacher Education.

413 (613) Instructional Strategies: Modern Foreign Language (3) Trends in teaching secondary school Modern Foreign Language grades 7-12; purposes, techniques, materials and evaluation in teaching Modern Foreign Language. Directed experiences in public schools. Prereq for 413: TCED 302 and admission to Teacher Education. Prereq for 613: TCED 780 and admission to Teacher Education.

Course Descriptions

419 (614) Course to Teacher Education. Prereq for 614: TCED 780 and admission to Teacher Education.


420 (620) Workshop in Education: [Title of Workshop] (1-3) Workshop on selected topics. Same as ELED 490 (690) if same Title of Workshop. No more than six hours of workshop credit may be applied to an undergraduate or graduate degree in education. Prereq: Instructor’s approval.

421 (621) Computer Literacy for the Classroom Teacher (3) Familiarization with the microcomputer as pertains to the public school. Familiarity with commonly used computer terminology, development of an awareness of different types of software and ability to determine what constitutes good quality software. Study of word processing and emphasis as a tool for the teacher in the classroom. Prereq: Admission to Teacher Education.

422 (622) The Microcomputer and Its Use in the Classroom (3) Provision of the understanding and skills necessary to make the computer an effective tool in the classroom. Focus on the use of the computer in the various subject (grade level) areas. Attention to computer ethics. (Same as ELED 422/622)

423 (623) Logo for the Public School Teacher (3) Focus on the educational, philosophical and psychological development of the Logo environment in a public school setting. Emphasis on the project approach. Prereq: Admission to Teacher Education. (Same as ELED 423/623)


725 Advanced Education Seminar [Selected Topics] (3) Course can be taken in multiples of three semester hours for a maximum of nine semester hours. Certain sections may be offered on a pass/fail basis. Prereq: Permission of instructor.

730 Problems in Teaching in a Secondary School: [Subject Area] (3) Current issues related to the teaching of the particular area. Topics may include, but not be limited to, individual and/or group investigation of problems involved with teaching in the discipline, the development of higher order reasoning skills, as well as discussion of recent curriculum trends and materials. Certain sections may be offered on a pass/fail basis.

760 Supervision of Student Teaching and Field Experiences (3) A study of objectives and general techniques of supervising student teachers and students participating in field experiences in public schools.

792 Master Research Project, 7-12 (2) The culminating professional research project for the Master of Science in Education with a major in Teaching Program. Seminar topics to include but not limited to educational reform, curriculum design, student achievement, parent involvement, cultural diversity, education technology, assessments and educators as collaborative leaders and mentors (in a 7-12 setting). Prereq: SEDU 791. May repeat enrollment. P/N only.

793 Student Teaching Grades 7-8 (3) Supervised student teaching in grades 7-8 for a minimum of 7.5 weeks. Must be taken with SEDU 794.

794 Student Teaching Grades 9-12 (3) Supervised student teaching in grades 9-12 for a minimum of 7.5 weeks. Must be taken with SEDU 793.

795 Student Teaching Grades 7-12 (5) Supervised student teaching in grades 7-12 for a minimum of 7.5 weeks. To be taken by candidates seeking licensure in K-12 programs.
Social Work (SWRK)

200 Introduction to Social Work and Social Welfare (3) 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. An overview of the historical, philosophical, educational and social dimensions of the social work profession. The origins, structure and characteristics of the American social welfare system. Survey of the needs and problems people bring to social welfare agencies and patterns of societal responses. Special emphasis on rural areas.

220 Understanding Human Diversity and Oppressed Populations (3) Focuses on the dynamics and consequences of discrimination, economic deprivation and oppression on people of color, women, gay and lesbian persons. Other populations at risk are examined and distinguished by age, ethnicity, culture, class and physical or mental ability. Exploration of personal and professional beliefs, values, roles and norms of culturally different clients and the use of culture in formulating appropriate intervention. (Same as WMST 220)

300 Social Welfare Policies and Services (3) Focuses on the identification of and relationship between social problems and social welfare policy. Emphasis is on social policy analysis using principles of social and economic justice as well as on intervention strategies at the local, state and national levels. Prereq: Approval for initial progression.

315 Social Work in Health Care (3) Provides special emphasis on the elderly. The role of the social worker relative to the patient and his/her family and to medical personnel, medical terminology and crisis intervention. Prereq: Instructor’s approval.

320 Human Behavior and Social Environment I (3) Introduces a broad range of theories relating to human bio-psycho-social development through childhood. General systems theory used to provide a social work orientation to the understanding of human behavior in individuals, small groups, large groups, communities and formal organizations. Social and economic factors as well as sex/gender and race are considered as determinants of behavior. Prereq: Approval for initial progression; ZOOL 201 or 251; PSYC 110 or 120.

325 Social Work in Child Welfare (3) Focuses on child neglect and abuse, family treatment, foster care, adoptions and other family and children’s services. Prereq: Instructor’s approval.

330 Human Behavior and Social Environment II (3) Continues the presentation of a model which analyzes the life-cycle and organizational functioning focusing on the period from early adolescence through very old age, as well as the effects on systems of diversity, oppression and populations-at-risk. Emphasis is placed on the interactional processes involved in the socialization of the individual as a member of the family unit, social groups, organizations and communities. Prereq: SWRK 320.

335 Social Work in Mental Health (3) Focuses on mental retardation and mental health issues and appropriate interventions at the micro, mezzo and macro levels. Prereq: Instructor’s approval.

340 Social Work Practice I (3) Presents a generalist approach to the basic principles and concepts of social work practice. Building on foundation knowledge, values and skills introduced in SWRK 200, an ecological-systems approach to problem solving is emphasized. Introduction of the general methods of social work interaction on micro-systems is the primary emphasis. Prereq: SWRK 320 and concurrent registration in SWRK 350.

345 Juvenile Justice: Social Problems and Legal Issues for Social Work and Criminal Justice (3) Focuses on the juvenile, the family and the community as related to and interwoven with legal issues, practices and processes encountered by the social work and criminal justice professionals and their clients. (Same as CJ 370)

350 Social Work Practice Skills and Techniques (3) Offers lab-like interaction which builds on the theoretical information presented in SWRK 340. Skills and processes of engagement, data collection, assessment, intervention, evaluation and termination phases in service delivery with a variety of systems are included. This course focuses on interviewing and recording techniques which can be applied to all levels of social work practice. Role play
and videotaped scenarios assist in development of skills. **Prereq: SWRK 320 and concurrent registration in SWRK 340.**

**375 Social Work in the School Setting (3)**
Provides understanding of the social worker’s role in the interface between pupils, parents, schools and communities. Focus on primary prevention and intervention in the school setting. **Prereq: Instructor’s approval.**

**400 Social Work Practice II (3)**
Is the second of three courses providing the framework for generalist beginning social work practice and builds on the foundation provided in SWRK 340. Emphasis on mezzo-systems including family system. Also, an overview of group work, including a historical perspective and related group models. Focus on group formation, including assessment, composition, working agreement and stages of group development. Nondiscriminatory practice reinforced. Student participation in field experience is required. **Prereq: SWRK 340 and approval for advanced progression.**

**410 Social Work Research and Evaluation (3)**
Introduces students to quantitative and qualitative methods of research used in social work. Emphasis will be placed on developing the student’s knowledge and ability to ethically use scientific inquiry as a tool for adding to the knowledge base of social work practice, evaluating one’s own practice and evaluating social service programs. **Prereq: MATH 210 and approval for initial progression.**

**415 Social Work in Child Welfare II (3)**
This course is a preparatory course for certification as a child welfare worker. Specific knowledge, skills and values of the Tennessee Department of Children’s Services are presented. **Prereq: SWRK 325 and admission to the social work program.**

**425 Special Topics (1-3)**
Selected topics of current interest and importance. **Prereq: Instructor’s approval. Course may be repeated with different topics.**

**440 Social Work Practice III (3)**
Is the third of three courses providing the generalist method as a practice framework for beginning social work practice. Integration of knowledge, values and skills in problem solving, interpersonal helping and intervention approaches with individuals, groups and communities. Primary emphasis on macro-systems. Ethical implications of practice examined in depth. **Prereq: SWRK 340 and approval for advanced progression.**

**455 Social Work Travel Study [Selected Topics] (1-6)**
A course designed as an educational travel experience in Social Work within the United States or internationally under the supervision of a university instructor. May be taught as an organized study-tour or as an independent travel and study project. Topics, prerequisites and course requirements announced in advance. May be offered on a pass/fail basis. Students may repeat course with different topics. Not regularly offered. Requires instructor’s approval.

**460 Social Work Senior Seminar (2)**
Integration of social work professional foundation areas as defined by the Council on Social Work Education in a written case study. This course must be taken the semester prior to SWRK 490.

**470 Social Work Field Instruction Preparation (1)**
A lab course designed primarily to prepare students for field instruction, professional employment and/or continued training. This course must be taken the semester prior to SWRK 490.

**490 Social Work Field Instruction (12)**
Provides block placement for direct practice experience in a selected social work setting. Students’ activities are supervised jointly by a designated agency employee in the work setting and by the Social Work Program Coordinator of Field Instruction or other designated social work faculty. Individual work with student interns and their supervisors is provided by periodic visits during the semester by faculty. Additional learning and preparation through regularly scheduled seminars. **Prereq: Completion of all other courses required for graduation and approval for full progression.**
Sociology (SOC)

201 General Sociology (3) Study of human society and the means by which groups and individuals adjust; the nature of social process, social structure, social organization (institutions) and social change.

202 Social Problems (3) Analysis of selected contemporary social problems in their social and cultural setting. Develop an awareness of local, national and international social problems. Learn and apply sociological perspectives to the analysis of social problems.

208 Marriage and Family (3) The relationships of the family structure to social organization. Particular emphasis focused on the family historically, mate selection, marital adjustment, marital happiness and divorce in a changing society. (Same as WMST 208)

300 Cultural Anthropology (3) An examination of theory and method in cultural anthropology as used in the analysis of multicultures. Case studies from different ethnographic settings provide the primary source material. Prereq: ANTH 101, SOC 201, or instructor’s approval. (Same as ANTH 300)

301 Social Research Methods (3) Major concepts and techniques in social science research, including the scientific method, measurement, sampling and data collection techniques. Prereq: SOC 201 and 202 with grade of C or above.

302 Social Statistics (3) Emphasizes proper use and interpretation of statistics in research and evaluation settings. Covers descriptive and inferential statistics, including central tendency, variability, analysis of variance, correlation and regression. Intensive training in the use of statistical and spreadsheet programs for calculating statistics. Prereq: Any MATH course numbered above 100, SOC 301.

304 (504) Race, Class and Power (3) Description of stratification patterns, functions and dysfunctions of such patterns, conflicts generated by race and class and possible ways of resolving problems associated with race/class differences. Prereq: SOC 201. (Same as ANTH 304/504)

305 (505) Sociology of Deviant Behavior (3) Theoretical analysis of the relation of deviant behavior to social and cultural standards of value, convention and law. Prereq: SOC 201.

306 (506) Religion and Society (3) Interrelationships of society, culture and religion. Prereq: SOC 201. (Same as ANTH 306/506 and RLST 306)

312 Social Psychology (3) A study of social influences on human behavior. Attitudes, conformity, prosocial and antisocial behavior, prejudice, interpersonal perception and attraction, leadership, persuasion and group dynamics. Lectures and readings are supplemented by measurement of social behavior in class projects. Writing requirements include essay examination questions and research papers. Prereq: Three hours general psychology or general sociology. (Same as PSY 312)

341 (541) Men and Women: Gender Roles in American Society (3) An examination of how gender is socially produced and the implications of gender for individuals, social processes and social structure. Prereq: SOC 201. (Same as ANTH 341/541 and WMST 341)

364 (564) Corrections (3) Provides an overview of the history and various perspectives of incarceration, tracing the development of prisons in America from their earlier roots in Europe. An examination is placed upon prison inmates, correctional staff, correctional treatment and punishment philosophies, political perspectives regarding criminal offenders and special interest offenders such as juveniles and females, as well as capital punishment. (Same as CJ 364/564)

381 (581) Special Topics (3) Selected topics of current interest in sociology and/or anthropology. Course may be repeated with different topics. Maximum of six hours of topics/courses can be counted toward the major or minor. (Same as ANTH 381/581)

402 (602) Sociological Theory (3) A survey and analysis of classical and contemporary sociological theory as it applies to both historic and current events. Topics may include inequality, genocide and the role of ideas and class as social forces driving history and theory forward. Prereq: SOC 201 and 202 with grade of C or above.
404 **Social Stratification** (3) An emphasis is made upon the class system of the United States with some comparisons to stratification systems of other times and societies. Theory and research appropriate to the analysis of structured social inequality are surveyed. *Prereq: SOC 201 or ANTH 101; SOC 202 or 208.* (Same as ANTH 404)

413 (613) **Criminology** (3) Problems, theory, cause, control and prevention of criminal behavior. *Prereq: SOC 201.* (Same as CJ 325/525)


455 **Sociology Travel Study [Selected Topics]** (1-6) A course designed as an educational travel experience in Sociology within the United States or internationally under the supervision of a university instructor. May be taught as an organized study-tour or as an independent travel and study project. Topics, prerequisites and course requirements announced in advance. May be offered on a Pass/Fail basis. Students may repeat course with different topics. Not regularly offered. Requires instructor's approval.

480 **Internship in Sociology** (3-6) Application of sociological skills in a supervised workplace setting. Placement will be determined by the instructor, in consultation with the student. The student may or may not be paid. Student grades will be based on the instructor’s academic evaluation as well as the work evaluation by the student’s on-the-job supervisor. *Prereq: SOC 201, 202; Sociology major, senior standing; minimum 3.00 GPA in Sociology coursework or permission of department chair. May only be taken once for credit.*

485 **Directed Reading and Research** (3) A systematic sociological/anthropological study of a selected topic through supervised reading of pertinent substantive and methodological literature, primary data collection or use of secondary data and statistical analysis of data by a Sociology/Anthropology faculty. Maximum of six hours of primary topic research or different topics can be counted toward major or minor. By arrangement only. *Prereq: ANTH 101 or SOC 201, an additional three credit hours sociol/anthropology course, minimum cumulative GPA of 3.00 and instructor's approval of topic and research methods.* (Same as ANTH 485)

495 (695) **Comparative Family Systems** (3) An examination of families both cross-culturally and historically. Attention is directed to understanding the variation and similarities in family structures, marital arrangements, premarital relations, gender roles and socialization. *Prereq: SOC 201.* (Same as ANTH 495/695 and WMST 495)

### Soil Science (SOIL)

210 **Soil Science** (4) The nature and properties of soils. Provides an introduction to the characteristics of soils. Discussions of the biological, chemical and physical processes which occur in soil and how these processes affect plant growth and environmental quality. Three one-hour lectures and one two-hour lab. *Prereq: CHEM 111 or 121 or consent of instructor.*

250 **Soil and Landscape Evaluation** (1) Principles of soil morphology as utilized in soil and landscape evaluation in the field. Involves describing, classifying and interpreting soils in preparation for regional and national soil judging contests. May be repeated. Maximum four hours. *Prereq: Consent of instructor.*

301-302 **Special Problems** (1, 1) Individual problems for students exhibiting special interests and abilities in soils, soil morphology and classification, soil fertility, management and conservation. Maximum of one hour applicable to concentration requirements. Written project outline and report of results required. Taught only by arrangement prior to registration.

315 **Soil and Water Conservation** (3) Problems, principles and control of soil erosion by water and wind; land planning for soil conservation: water management, including irrigation and drainage problems; philosophies of land ethics and stewardship. Students are required to write reports and give oral presentations. Three one-hour lectures. *Prereq: SOIL 210.*
321 Soil Genesis, Morphology and Classification (3) Study of the soil as a natural, three-dimensional system: the effect of geologic, climatic and biotic interactions on soil characteristics and processes of formation and methods of classifying soils. Two one-hour lectures and one three-hour lab. Prereq: SOIL 210.

401-402 Research Participation (3, 3) Research project involving supervised independent study for students exhibiting special interests and abilities in the soils area. Maximum of three hours applicable to concentration requirements. Presentation of written project outline and written and oral reports required. Taught only by arrangement prior to registration. Prereq: Senior standing, minimum GPA of 2.75.

412 (612) Soil Chemistry and Fertility (3) The principles of soil chemistry as they relate to ion exchange, nutrient availability and soil fertility. Sources, properties and utilization of fertilizers and other soil amendments by plants. Three one-hour lectures. Prereq: SOIL 210.

420 Soil Microbiology and Biochemistry (3) Study of soil microorganisms including their habitats, activities and ecological relationships. Emphasis on microbial interactions and processes which affect both agricultural practices and environmental quality, including: nutrient cycling, decomposition of organic residues and compounds dynamics of soil organic matter: enzymatic activities: potential use of soil organisms for environmental remediation. Three one-hour lectures. Prereq: SOIL 210 and MBIO 251 or 310, or consent of instructor.

421 Soil Microbiology and Biochemistry Laboratory (1) Lab study of soil microbial populations, organic compound decomposition, nitrogen transformations and enzyme activities in soils. One three-hour lab. Prereq: Completion of or concurrent enrollment in SOIL 420.

430 (630) Wetland Science (3) An introduction to the conservation and management of wetland environments. Emphasis will be placed on the role of wetlands in maintaining water quality and strategies for multiple use management of wetland resources. Students will become familiar with basic and applied concepts in hydrology, soils and vegetation of both constructed and natural wetlands. Three one-hour lectures and two Saturday field trips. Prereq: CHEM 111 or 121, BIOL 120 or 140, MATH 140, or consent of instructor. It is the assumption of the instructor that a student has a basic understanding of biological chemistry, for example the processes of photosynthesis and respiration.

440 (640) Soil Physics (3) An introduction to soil as a porous medium that supports the growth of plant roots by retaining air, heat, water and nutrients. These same physical processes govern the movement of chemicals in the environment. The course will cover physical processes and properties and develop the concepts of transport and retention.

Spanish (SPAN)

111 Elementary Spanish (4) (TBR: SPAN 1010) An introductory course emphasizing listening, speaking, reading and writing. May be used to remove an entrance deficiency or for students with no prior experience in this language. After passing 111, students will take the second semester of the elementary sequence, 122. Three one-hour lectures and two one-hour labs.

115 Transitional Spanish (4) A review of listening, speaking, reading and writing for students who have had two years of Spanish at the high school level or equivalent as determined by the department. After passing SPAN 115, students will take the second semester of the elementary sequence, SPAN 122. Three one-hour lectures and two one-hour labs.

122 Elementary Spanish (4) (TBR: SPAN 1020) An introductory course emphasizing listening, speaking, reading and writing. Three one-hour lectures and two one-hour labs. Prereq: SPAN 111 or 115 or equivalent as determined by the department.

222 Intermediate Spanish (4) Grammar review, reading, writing and conversation. Three one-hour lectures and two one-hour labs. Prereq: SPAN 122 or equivalent as determined by the department.

250 Latin America Today: The Peoples and Cultures of Latin America (3) An interdisciplinary study of Latin America today, with emphasis on the life-styles, customs, mentality and overall culture of the peoples of this region. Discussion of current
trends in politics, education, media, religion and literature and the arts (including popular culture) especially as they illustrate important cultural values and attitudes. Consideration of the attitudes of Americans towards the peoples of Latin America and vice versa. Taught in English.

300 (500) Intensive Conversation in a Foreign Country (3) In-residence training in the foreign language of the area visited. The course elected must be approved in advance by the Chair of the Department of Modern Foreign Languages. Research project required for graduate credit. Prereq: SPAN 222 or equivalent.

321 (521) Introduction to Spanish Civilization (3) A descriptive and critical approach to the instruction of Spanish history, geography, religious, political, social, educational and economic institutions. Research paper required for graduate credit. Prereq: SPAN 341 or 342 or departmental approval.

322 (522) Introduction to Spanish American Civilization (3) A descriptive and critical approach to the instruction of Spanish American history, geography, religious, political, social, educational and economic institutions. Research paper required for graduate credit. Prereq: SPAN 341 or 342 or departmental approval.

341 (541) Advanced Conversation (3) Emphasizes conversational skills. Oral practice to extend range of topics, vocabulary, fluency and conversational strategies. Study of the phonetic system of the Spanish language and exercises to improve pronunciation. Grammar appropriate for oral Spanish. Discussions utilizing readings and electronic media such as videos and the internet. Class presentation of research project required for graduate credit. Heritage speakers and those with near-native abilities in Spanish are not eligible to take this course. If they intend to major in Spanish or earn a Certificate of Proficiency, they should see the department chair for a waiver. Prereq: SPAN 222 or instructor’s approval.

342 (542) Advanced Composition (3) Emphasizes composition skills. Written practice to extend range of topics, vocabulary, fluency and composi-
385-386 (585-586) Survey of Spanish American Literature (3, 3) Selected readings to give students an acquaintance with important personalities, movements and ideas in Spanish American literature. 385: Discovery (1492) to Romanticism. 386: Realism (late 19th century) to present. Research paper required for graduate credit. Prereq: SPAN 341 or 342 or departmental approval.

401 Foreign Language Internship (3) Utilization of the target foreign language in a monitored work environment. Appropriate placements may be found locally, nationally, or abroad. Students may or may not be paid. Evaluation by both supervising instructor and on-the-job supervisor. Chair of the Department of Modern Foreign Languages approval must be obtained for internships to count towards minor, major, or Certificate of Proficiency. Prereq: SPAN 341 or 342.

451 (651) The Language of Business and the Professions (3) Study of the basic terminology and documents of business and various professions as practiced within the Hispanic world. In addition to business, professions such as communications, travel and tourism, agriculture and criminology will be covered. Composition of business letters and résumé s, translation and presentation of oral reports. Research paper required for graduate credit. Prereq: SPAN 341 or 342 or instructor's approval.

481 (681) 19th Century Spanish Literature (3) Study in depth of selected works. Prereq: SPAN 341 or 342 or instructor's approval.

482 (682) Contemporary Spanish Literature (3) Study in depth of selected works. Prereq: SPAN 341 or 342 or instructor's approval.

486 (686) Contemporary Latin-American Literature (3) Study in depth of selected works. Prereq: SPAN 341 or 342 or instructor's approval.

491 (691) Spanish and Latin-American Cinema (3) Study of major works in Spanish and Latin-American cinema from the 1920s to the present day. The films surveyed will illustrate the development of Spanish and Latin-American cinema and will focus on important socio-political and cultural issues in Twentieth-Century Spain and Latin America. Research paper required for graduate credit. Prereq: SPAN 341 or 342 or instructor's approval.

495-496 (695-696) Topics in Spanish Language, Literature, or Civilization (1-3, 1-3) Study of selected aspects of Spanish language, literature, or civilization. Taught in Spanish. Topics and prerequisites announced in course schedule. Research paper required for graduate credit. Students may repeat course with change of topic. Only six hours of topics courses may count towards a minor, major, or Certificate of Proficiency. Not regularly offered.

498-499 (698-699) Independent Study (1-3, 1-3) Directed reading or research under supervision of a staff member. Available only to Juniors and Seniors having completed at least six hours of upper-division coursework in Spanish. Project must be approved by faculty in the discipline concerned and the department chair. Research paper required for graduate credit. Students may take no more than six hours of independent study.

Special Education (SPED)

300 (500) Exceptional Child (3) An introductory course designed to provide an overview of the field of special education. Principles, characteristics, programs, special needs, legal requirements and instructional strategies related to the education of handicapped children.

386 (586) Practicum in Special Education (3) The initial field experience in special education. Emphasis will be on observation participation. There will be 75 contact hours in P-12, split between at least two settings. Prereq: SPED 300.

387 (587) Practicum in Teaching Exceptional Children (Birth-6) (3) The initial field-based experience in special education. The course will require a total of 75 contact hours split between two different settings. Optional settings will be school, hospital, Children's Center and the Head Start program. Prereq: SPED 300.

415 (615) Characteristics and Needs of Children with Disabilities (3) Examination of various areas of exceptionality including mental retardation, learning disabilities and behavior disorders. Focus on the evolution of each area and its relationship to the individual, family, society and education. Prereq: SPED 300.

425 Sign Language (3) Manual communication of the deaf, emphasis on expressive and receptive use of finger spelling in a total communication approach. Different manual communication methodologies will be explored. Prereq: SPED 300.

430 (630) Early Childhood–Special Education (3) This course examines: Growth and development of children from birth to age 9 in the context of family life; etiological factors affecting young children with developmental delays; cultural, familial, educational and legal implications; behavioral characteristics of children in early intervention programs; the philosophy, methods, materials, settings and acceptable standards involved in the intervention and instructional procedures of early childhood-special education programs. Prereq: SPED 300. Recommended prereq: SPED 420.

432 (632) Educational Procedures for Children with Exceptionalities (4) Examination of the relationship between the characteristics and needs of exceptional children and specialized instructional procedures. Development of skills in analyzing curriculum requirements, writing individualized education programs (IEP’s), teaching effectively and evaluating the legal aspects of special education will be emphasized. Prereq: Admission to Teacher Education and SPED 300.

437 (637) Assessment of Exceptional Children (3) The purpose and how to administer, score and interpret each test instrument. Assembly of a case study to aid in the diagnosis and treatment of the learner. Prereq: Admission to Teacher Education, SPED 300.

440 (640) Advanced Methods for Students with Mild Disabilities (3) An examination of the unique needs and particular issues which are specific to students with mild disabilities and at-risk populations. The course emphasizes curriculum methodology and approaches in general and special education classes. Prereq: Admission to Teacher Education, SPED 300.

450 (650) Characteristics and Needs of the Gifted/Talented (3) Historical and societal perceptions, characteristics, needs, psychological and educational considerations and identification of the gifted/talented. Prereq: SPED 300.

451 (651) Strategies and Programs for Teaching the Gifted/Talented (3) Curriculum development and effective teaching strategies with the gifted/talented in various educational environments. Prereq: Admission to Teacher Education, SPED 300 and 450 or instructor’s approval.

460 (660) Behavior Interventions (3) Advanced strategies for managing social behaviors that impact on academic learning of mildly, moderately and severely disabled children. Techniques for eliminating maladaptive behaviors, managing aggressive and antisocial students and teaching appropriate social skills for special education students. Prereq: Admission to Teacher Education and SPED 300.

470 Integrating Children with Disabilities in Regular Education (3) Examination of the programs, materials, teaching techniques and classroom modifications for integrating exceptional learners in regular education. An overview of PL 94-142, IEP as they relate to least restrictive environment. An examination of the regular education staff (attitudes, preparation, resources and coordination) will be addressed. Prereq: SPED 300.

490 (690) Workshop in Special Education: [Title of workshop] (1-3) Workshop on selected topics. No more than six hours of workshop credit may be applied to a graduate degree in education. Prereq: Instructor’s approval.

700 Consultation Approaches and Strategies (3) Focus on the special educator as one member of a parent/ professional team meeting the needs of exceptional children. Examination of the role of consultation in delivering special education services, definitions of consultations, communication skills and collaborative strategies.
710 Advanced Practicum in Teaching Exceptional Children (6) Advanced special education field-based experience. Focus on refining skills in the sequence of collecting student assessment data, developing IEPs and establishing instructional programs, as well as examining other facets of special education. Prereq: SPED 632, 637 (can be taken concurrently with 632).


730 Trends in Special Education (3) Current trends in special education including but not limited to transition services, inclusion, assistive technology, curriculum-based measurement, video self-modeling, communication and collaborative team building with parents, administration and professionals.

Sport Management (SPMG)

305 (505) Introduction to Sport Management and Administration (3) Overview of the fundamental principles of management and administration of sport programs. Combines theory and practice related to legal and ethical issues, marketing and organizational structure of recreational and sport related services and facilities.

306-307 Sport Management Practicum (2, 2) An introduction to a variety of career opportunities, developing a professional resumé, professional philosophy, professional goals and objectives and a professional portfolio. Includes a 45 hour supervised study and experience with a cooperating agency. Application must be approved and liability insurance purchased before student may enroll. Prereq: Student must be a Department of Health and Human Performance major.

406 (606) Advanced Sport Management and Administration (3) In-depth study of the fundamental principles of management and administration of sports programs. Combines theory and practice related to ethics, law, finance, diversity and planning/management of facilities and events. Also includes field observation hours in a related area. Prereq: SPMG 305 or instructor's approval.

413 (613) Event and Facility Planning (3) Practical application of principles and theory related to the management of sport and entertainment events including small and large scale facilities and event venues. Students are prepared to design, run and evaluate events and event management teams. Prereq: SPMG 406 or instructor's approval.

720 Theory and Application in Sport Management and Administration (3) Comprehensive review of time-honored and current management models used in sport, recreation, fitness and related services. Legal and ethical issues, organizational structure and application of management techniques to real-world situations will be focal points.

Statistics (STAT)


365 (565) Regression Analysis (3) Measuring the relationship among variables using standard regression techniques. Topics include simple, multiple and polynomial regression, model fitting, verification of model assumptions and examination of residuals. Prereq: MATH 251, 310; either STAT 325 or ENGR 311 or departmental approval. Credit for both MATH 360 and MATH 365 or STAT 365 (565) will not be allowed.

375 (575) Sampling Theory (3) Mathematical development of sampling. Consideration of simple probability sampling including simple random, stratified random, cluster and multistage sampling. Deriving estimates and variances of estimates for different sampling designs. Prereq: STAT 325 or ENGR 311 or departmental approval.
385 (585) Nonparametric Methods (3) Alternatives to normal-theory statistical methods; analysis of categorical and ordinal data, methods based on rank transforms, measures of association, goodness-of-fit tests, order statistics. Prereq: MATH 251 and either STAT 325 or ENGR 311 or departmental approval.

435 (635) Categorical Data Analysis (3) Analysis of categorical data. Contingency tables, exact tests, loglinear models, analyses involving ordinal variables, binary response models and multinomial response models. Prereq: MATH 251 and either STAT 325 or ENGR 311 or departmental approval.

455 (655) Design of Experiments (3) The design and analysis of experiments. Topics include one and two factor analysis of variance, randomized designs, repeated measures and factorial experiments. Prereq: MATH 251; either STAT 325 or ENGR 311 or departmental approval.

461 (661) Probability and Statistics I (3) Discrete and continuous probability spaces, statistical independence, distributions, discrete and continuous random variables, expectations, moment-generating functions, limiting distributions, estimation of parameters, confidence intervals, hypothesis testing with applications, linear regression and correlation, multiple linear regression. Prereq: MATH 251; either MATH 314 or CSCI 301; either STAT 325 or ENGR 311 or departmental approval. Credit for both MATH 461 and STAT 461 will not be allowed.

462 (662) Probability and Statistics II (3) Discrete and continuous probability spaces, statistical independence, distributions, discrete and continuous random variables, expectations, moment-generating functions, limiting distributions, estimation of parameters, confidence intervals, hypothesis testing with applications, linear regression and correlation, multiple linear regression. Prereq: MATH 320 and STAT 461. Credit for both MATH 462 and STAT 462 will not be allowed.

465 (665) Statistical Computing (3) Applications of major statistical software packages. Emphasizes the use of computers to perform statistical procedures and the interpretation of statistical output. Prereq: Either STAT 325 or ENGR 311 or departmental approval. Credit for both MATH 465 and STAT 465 will not be allowed.

491-492 (691-692) Special Topics [topic title] (1-3) Selected topics in statistics, student research, or seminar. Course may be repeated with total credits not to exceed six hours. Prereq: MATH 320; either STAT 325 or ENGR 311; departmental approval.

498 Undergraduate Research Experience I (2) Introduction to research methodologies and tools including LaTeX and MathSciNet. Presenting mathematics in written and oral formats. Ethics in research. This course includes substantial directed individualized study leading to the preparation of a significant paper. Prereq: consent of the department chair. Cannot receive credit for both MATH 498 and STAT 498. Graded on Pass/Fail basis.

499 Undergraduate Research Experience II (1) The presentation of mathematics works in both oral and written formats. This course will finalize the significant paper begun in MATH/STAT 498 and based on the student's individual research. This will require that it be presented at a regional or national meeting. Prereq: MATH 498 and consent of the department chair. Graded on Pass/Fail basis.

Teacher Education (TCED)

Note: For student teaching courses (402-412), students should check their program of study sheet and student teaching application for other student teaching prerequisites specific to their major.

211 Introduction to Teaching (1) A course designed to provide prospective teacher education majors with an introduction to teaching as a profession. Includes an overview of the Teacher Education Program (TEP) Conceptual Framework and development of the TEP portfolio.

301 Foundations of Education (2) An introductory course designed to provide prospective teacher education majors with an overview of the history and philosophy of education. This course addresses professionalism, history, philosophy and sociology of education; global understanding; diversity and governance in education. The course includes the initial development of a professional portfolio for each student as part of the requirements for completion of a degree within the College of Education and Behavioral Sciences.
302 Integrated Teaching Strategies (3) Addresses attitudes, knowledge and skills as defined in the College of Education and Behavioral Sciences Conceptual Framework: teaching and learning styles; strategies for teaching; planning for teaching; models of instruction; classroom management of instruction; and computer literacy. This course will also emphasize oral expression and written communication. Includes field experiences, directed observations and participation in a public school classroom setting. This course serves as a checkpoint for the teacher education portfolio. Prereq: Admission to Teacher Education.

303 Diagnosis and Evaluation (3) Designed to develop skills in selecting, constructing, administering and interpreting instruments appropriate for assessing differing needs and achievement of children and youth. This course serves as a checkpoint for the teacher education portfolio. Prereq: Admission to Teacher Education and TCED 302.

305 (505) Classroom Management (2) A study of skills and techniques facilitative to an effective classroom environment. Emphasis on behavioral management principles, classroom climate analysis and teacher/pupil rapport building. This course serves as a checkpoint for the teacher education portfolio. Prereq: Admission to Teacher Education.

340 Applied Mathematics and Science (4) Strategies and materials for teaching mathematics and science in the elementary classroom. Lesson unit plans, participation in developmentally appropriate hands-on activities, simulated and direct-teaching experiences. Includes directed observations and 4 hours small group instruction in classroom settings. Prereq: Admission to Teacher Education and TCED 302. Coreq: MATH 192 or instructor's approval.

350 Applied Social Studies and Language Arts (4) Strategies and materials for teaching social studies and languages arts in K-8 classrooms. Unit and lesson plans, activities and materials for the classroom, peer teaching. Special emphasis on meeting the needs of diverse learners. Prereq: Admission to Teacher Education and TCED 302.

401 Seminar in Teaching (1) Structured seminar for advanced discussion of instructional and classroom management, variety in methodology, discipline, school law, professionalism and related topics. Emphasis will also be placed on oral expression and written communication. Coreq: TCED 402-403 or TCED 404-405 or TCED 404-406 (student teaching courses). Prereq: Admission to Teacher Education.

402 Student Teaching Grades 1-4 (6) Supervised student teaching in grades 1-4 for a minimum of 7.5 weeks. Must be taken with TCED 401 and TCED 403. Prereq: Admission to Teacher Education, TCED 301-302-303, all specialized teaching strategies courses and Reading requirements. See note above.

403 Student Teaching Grades 5-8 (6) Supervised student teaching in grades 5-8 for a minimum of 7.5 weeks. Must be taken with TCED 401 and TCED 402. Prereq: Admission to Teacher Education, TCED 301-302-303, all specialized teaching strategies courses and Reading requirements. See note above.

404 Student Teaching Grades 7-8 (6) Supervised student teaching in grades 7-8 for a minimum of 7.5 weeks. Must be taken with TCED 401 and TCED 405. Prereq: Admission to Teacher Education, TCED 301-302-303, all specialized teaching strategies courses and Reading requirements. See note above.

405 Student Teaching Grades 9-12 (6) Supervised student teaching in grades 9-12 for a minimum of 7.5 weeks. Must be taken with TCED 401 and TCED 404 or 406. Prereq: Admission to Teacher Education, TCED 301-302-303, all specialized teaching strategies courses and Reading requirements. See note above.

406 Student Teaching Grades K-8 (6) Supervised student teaching in grades K-8 for a minimum of 7.5 weeks. Must be taken with TCED 401 and TCED 405 or 407. Prereq: Admission to Teacher Education, TCED 301-302-303, SPED 300, all specialized teaching strategies courses and Reading requirements. See note above.

407 Student Teaching in Special Education (K-12) (6) Supervised student teaching in special education K-12 for a minimum of 7.5 weeks. Must be taken with TCED 401 and TCED 406. Prereq: Admission to Teacher Education, TCED 301-302-303, SPED 300, all specialized teaching strategies courses and Reading requirements. See note above.

408 Student Teaching in Special Education: Non-School Setting (PreK-1) (6) Supervised student
teaching in special education non-school setting PreK-1 for a minimum of 7.5 weeks. Must be taken with TCED 401 and TCED 407. Prereq: Admission to Teacher Education, TCED 301-302-303, SPED 300, all specialized teaching strategies courses and Reading requirements. See note above.

409 Student Teaching in Kindergarten (6) Supervised student teaching in kindergarten for a minimum of 7.5 weeks. Must be taken with TCED 403 or TCED 412. Prereq: Admission to Teacher Education and completion of all specialty area and professional education requirements. See note above. (Same as ECED 409.)

450 (650) Designing Curriculum for the Early Adolescent (3) Review of the specific characteristics and educational needs of early adolescents (grades 6-9). Describes the current middle school movement, its historical antecedents and the development of curriculum appropriate for early adolescents, emphasizing curriculum integration, authentic assessment, student involvement in planning, etc. Prereq: Admission to Teacher Education and TCED 302, 340, or 350. Graduate level students will complete a research paper based on a critique, analysis and/or development of a middle school program model.

475 (675) Learning and the Kindergarten Child (4) A four-hour credit course in a state-approved kindergarten placement. It includes a weekly one hour seminar with a faculty member. Prereq: for 475 — Admission to Teacher Education and TCED 302; TCED 340 or TCED 350 (K-6 majors); ECED 341 or ECED 351 (PreK-3 majors) or permission of instructor; for 675 — Admission to Teacher Education. (Same as ECED 475/675.)

705 Advanced Strategies for Classroom Management (3) An investigation of theoretically-based strategies for identifying and sustaining effective aspects of existing classroom management structures. Proactive and practical solutions for management of a continuum of behaviors. Application of course content to case studies.

712 Learning Theory and Cognition Applied to the School Setting (3) The nature of learning processes and conditions for effective learning and implications for teaching exploration of how learning theory can be applied in the school environment to enhance the learning experience; recent directions in cognitive studies and their general implications for functional classroom use. Projects/activities will be individualized according to the licensure area being sought.

716 Growth and Development in School Age Students (3) The physiological, sociological and psychological basis of human behavior with emphasis upon research dealing with the normal student in a school environment. Projects/activities will be individualized according to the licensure area being sought.

780 Principles and Techniques of Teaching (3) The course is designed to provide the graduate student pursuing initial licensure the opportunity to engage in and become acclimated into the public school environment. Emphasis will be placed on integrating the initial conceptual framework into teaching and learning styles, strategies for teaching, planning for instruction, introductory classroom management, generic methods and development of the Teacher Education Program (TEP) portfolio. Thirty (30) clock hours of field work in a previously approved grade appropriate diverse public school setting.

781 Instructional and Management Strategies (3) The course will continue to integrate the initial conceptual framework into advanced strategies for teaching, planning for assessment and feedback, with special emphasis on managing the educational environment. The student's portfolio will be readied for admission to student teaching at the appropriate level. The class will meet for 90 minutes per week and will require 45 clock hours of field work in a previously approved, diverse public school setting. Prereq: Admission to Teacher Education and TCED 780.

791 Master Research Project, K-12 (4) The culminating professional research project for the Master of Science in Education with a major in Teaching Programs. Seminar topics to include but not limited to educational reform, curriculum design, student achievement, parent involvement, cultural diversity, educational technology, assessments and educators as collaborative leaders and mentors (in a K-12 setting). Prereq: EDEV 710 and EDFN 710. May repeat enrollment. P/N only.
795 Practicum in Initial Licensure (6) Job-embedded field-based experience with a focus on application of knowledge and skills, reflective practice and professional and ethical behavior. Collaboration among the teacher candidate, site-based mentor and university supervisor. Submission of lesson/unit plans and self-monitoring reflections required. Licensure will be recommended upon successful completion of degree requirements and required Praxis exams. Prereq: Completion of all course work in the Initial Licensure Major and full-time employment in a SACS accredited K-12 school.

306 Visual Merchandising and Presentation (3) The exploration of creative techniques utilized in the display of retail merchandise and their effective application to the enhancement of product saleability; to include presentation strategies for use with clients. A study of local and regional markets. Prereq: INTD 100 or TCFM 102.

307 Fashion Promotion (3) Fashion marketing communication techniques used to promote fashion merchandise. Evaluation of fashion retail sales promotion strategies.

308 Buying Functions in Merchandising (3) A comprehensive analysis of the buying structure, institutions and environments. Emphasis on buying practices, activities, techniques and underlying concepts fundamental to merchandising; computer applications. Two one-hour lectures and one two-hour lab. Prereq: MATH 140.

Textiles, Clothing and Fashion Merchandising (TCFM)

102 Fashion Selection and Personal Image (3) Principles and elements of design applied to the personal and professional clothing needs of men and women.

103 Clothing Construction and Evaluation (3) Basic principles of fitting, pattern alterations and apparel construction; comparative study of factors influencing quality of ready-made garments. One one-hour lecture and two two-hour labs.

200 Introduction to Fashion Merchandising (3) Survey of the fashion business focusing on fashion socioeconomics, principles governing origins and activities involved in the delivery of goods and services to the consumer, including implications of these factors to apparel merchandising.

300 Clothing and Human Behavior (3) Functional and sociocultural aspects of dress and adornment in world cultures. Historical, technological and economic influences. (Same as WMST 300)

303 Textiles (3) Consumer-oriented study of textiles emphasizing properties of fiber and fabric in relation to the selection, use and care of apparel and household textiles. Two one-hour lectures and one two-hour lab.

305 Fashion Industry Processes (3) Survey of the fashion industry from apparel production to marketing and distribution.
704 Social, Psychological and Aesthetic Analysis of Apparel (3) Analysis of social science theories and concepts applicable to clothing and appearance.

Theatre (THEA)

110 Understanding Theatre (3) (TBR: THEA 1050)
An overview of contemporary theatre and drama, initiating basic critical analysis of art and theatre as art in relation to various other art forms and popular entertainment. Particular attention is given to theatre's place in society, its diversity and its relevance to students today. Notable connections are made between theatre and the familiar world of Hollywood, television and film. The roles of the actor, director, playwright and designer are surveyed.

111 Understanding Theatre (3) An overview of the history and literature of theatre with various representative theatre eras presented in a broad social, political and economic context. Critical analysis concerning art and theatre as art in relation to various other art forms and popular entertainment, as it applies to the history of theatre, bringing theatre from the past to life today is a major component of the course.

110H Honors Understanding Theatre (3) A contemporary overview of theatre as an art form. Introduction to the roles of the actor, director and designer. Basic theory and criticism. For students in good standing in Honors Programs.

150 Theatre Workshop (3) Supervised group projects in the construction of sets, painting, lighting and costume making. Six hours of scheduled work per week in preparation for a major production. May be repeated for credit.

201 Theatre Production (1) Practical application of theatre studies in a production environment. May be repeated for credit. Prereq: B.F.A. majors only or permission of instructor.

220-221 Acting (3, 3) Introduction to acting involving improvisation and other exercises. Development of concentration, contact between actors, stage movement, voice production, character/text analysis skills and confidence. May be taken out of sequence.

301 Theatre Production (2) Practical application of theatre studies in a production environment. May be repeated for credit. Prereq: B.F.A. majors only or permission of instructor.

330 Costuming and Stage Makeup (3) Practical application of costume design concepts and makeup techniques for the stage. Prereq: THEA 110.

360 (560) Stagecraft (3) Principles of technical theatre including scene construction, stage management and dramatic production supervision.

380 Play Interpretation and Direction (3) Play direction studied through a series of exercises and scene work designed to teach the basic tools of stage composition. Focuses on the use of script analysis and its application to performance. Encourages exploration of a personal technique and style. Prereq: THEA 220 and 221. May be repeated for credit.

390 (590) Playwriting (3) Writing exercises, scenes and one-act plays which may be performed in the lab theatre. Prereq: ENGL 111-112 and THEA 110 and 220 or by permission of the instructor. (Same as ENGL 390/590.)

391 Special Topics in Theatre (3) Selected topics for intensive study. Topics and prerequisites to be announced. May be repeated for credit.

401 Independent Study (3) Directed study in the area of theatre performance or production. Taught by arrangement. Prereq: THEA 110, 111 and 220. May be repeated for credit.

410 Lighting and Sound Design (3) The design of stage lighting for the theatre environment includes instrument maintenance, lighting control, color media, shop procedures and electricity. A practical study of sound, sound equipment and sound systems utilized in sound design for theatrical productions. Prereq: THEA 110 and 360.

420 Advanced Acting (3) Develops the actor's skill through a systematic course progression of advanced acting techniques including: 1) Styles—Classical Greek, Commedia dell’ Arte and Shakespearian, 2) Realism—scene work and script analysis of plays by Chekhov, Ibsen and other modern playwrights, 3) Contemporary- improvisation, scene study and analysis of plays by Tennessee Williams, Sam Shepard, Paula Vogel and other contemporary playwrights. Prereq: THEA 220 and 221. May be repeated for credit.
430 (630) Scene Design (3) Development of the total design concept involved in creating scenery for the stage environment. **Prereq: THEA 110 and 360.**

460 Senior Project (1) Preparation of any of the following based on the student’s area of interest: a portfolio, script, critical research paper, design, acting recital, or direction of a short play. Projects are selected and prepared under the supervision of a theatre faculty member. Mandatory pass/fail.

### University Scholars (UNSC)

118, 128 Seminar (1, 1) Discussion-oriented seminars on interdisciplinary topics and investigations of masterpieces of the heritage of Western thought with professors in the disciplines related to the topic leading discussions. Graded on Pass/Fail basis.

218, 228 Reading-Discussion Groups (1, 1) Each group consists of three to five students and one professor. Each group pursues a different course of study determined by the students and faculty together. Graded on Pass/Fail basis.

318, 328, 418 Specialized Studies (1, 1, 1) Studies in the student’s area of interest with personal guidance by members of the faculty. A natural outcome of the study should be the emergence of a senior project (488). Taught by arrangement and graded on Pass/Fail basis.

488 Senior Project (3) Students pursue the preparation of significant work under faculty direction (research, artistic performance or composition, creative writing etc.) The senior project must be approved in advance by the Honors Programs Director and is graded on Pass/Fail basis.

### Wildlife Biology (WBIO)

240 Fish and Wildlife Management Techniques (4) This class will expose students to field and lab techniques commonly used in management of fish and wildlife populations. Course content includes methods used to capture, mark and handle animals; determination of age and sex; monitoring of individuals and populations; and population density estimation. Includes field trips requiring walking through strenuous terrain. Three hours lecture and one two-hour lab. **Prereq: Be enrolled in Wildlife Biology or instructor’s approval.**

250 Principles of Wildlife Management (3) Current principles and practices used in management of wild animals. Includes historical, biological, behavioral, sociological and economic components. Attention will be given to management tools including control of hunting, predator control, refugia, propagation and environmental controls. Three-hour lecture.

300 Principles of Fisheries Management (3) An introduction to the concepts and approaches in management of freshwater fisheries, with emphasis on regionally important sport fishes. Includes coverage of artificial manipulation of populations and consideration of various user groups such as commercial, recreational and non-consumptive users. Class sessions may involve outdoor activities.

301 Special Problems (1-6) Independent study projects for students exhibiting special interest and abilities in wildlife science. Written project outline and report of results required. Taught only by arrangement prior to registration.

311 Game Ecology and Management: [Topics title] (3-9) This course will be offered in 3 sections, each which may be taken for 3 hours credit (9 hours total). The first section, Waterfowl Ecology and Management, deals with the ducks and geese of North America, with an emphasis on those common along the Mississippi Flyway. The second section, Big Game Ecology and Management, provides a brief overview of the big game of North America and a more in-depth analysis of those present in Tennessee: white-tailed deer, black bear, wild boar and elk. The third section, Upland Gamebird Ecology and Management, gives students a general exposure to the turkey, quail and grouse of North America and a more in-depth understanding of the ecology and management of those extant in Tennessee: the eastern wild turkey, ruffed grouse and bobwhite quail. The course will provide students with our most up-to-date scientific knowledge of the ecology of those species and with a basic understanding of the tools used by wildlife scientists and managers to maintain healthy populations. Students who successfully complete this course will be able to provide an overview of the range and
status of the species of interest at a continental scale; detail the range, life history, behavior and habitat of the species of interest in Tennessee; explain the management history and recovery efforts for the species in Tennessee; understand essential components of habitat management, including establishment of refugia, food plots, native habitat provision, etc; and describe harvest management practices and policy.

320 White-tailed Deer (1) A complete study of white-tailed deer including biology, behavior, management, history, social impacts and damage control. Status of the population in Tennessee, food habits, management scenarios throughout the country will be considered, along with taxonomy of the species throughout its range.

330 Wildlife Biopolitics (3) Involves the study of special interest/political influences on wildlife management techniques and administration. It specifically outlines cases of management decisions in the Southeast involving big game, small game, furbearers and waterfowl.

340 Wildlife Law Enforcement and Public Relations (3) Fundamentals and general principles of local, state and federal laws and regulations governing natural resources and their management. Principles and practices of interacting with the public. Prereq: Be enrolled in Wildlife Biology or instructor's approval.

420 Wildlife Damage Management (3) Philosophies, principles and concepts related to practical management of wildlife-human conflicts. Includes basic information on the use of traps, toxicants, repellents, exclusion and other wildlife damage control methods that help resolve damage to property and threats to human health and safety. An integrated management approach is used, considering various techniques along with biological, economic and socio-cultural aspects. Students will weigh these considerations, then use a Wildlife Damage Management Decision Model in formulating management approaches for real-world wildlife conflict situations. Prereq: Junior standing or permission of instructor.

441 Forensic Techniques in Wildlife Biology (3) Investigative techniques of collecting preserving and utilizing evidence involving violation of wildlife laws. Includes hair and tissue identification, osteology, wound examination, ballistics, cause and time of death, collecting and handling evidence and expert witness in court. Prereq: Wildlife Biology or instructor's approval.

450 Wildlife Habitat Management (4) This course will provide students with an understanding of relationships between wildlife and forest, farmland and wetland habitats. Models and other methods used to quantify wildlife-habitat associations will be examined. Students will explore the concepts of habitat use, selection and preference; the importance of spatial scale; the significance of plant succession and the methods for manipulating habitats to increase, decrease and maintain wildlife populations. Planning, designing and budgeting wildlife management plans from a private and public land perspective are included. Three-hour lecture and one lab. Prereq: Be enrolled in Wildlife Biology or instructor's approval.

770 Topics in Wildlife Biology (1-6) Topics in selected areas of wildlife biology. For graduate students in the Master of Science in Agriculture and Natural Resources Systems Management program. Can be used to meet requirements in the MSANR curriculum.

Women’s Studies (WMST)

100 Lifespan Human Development (3) Study of human needs and developmental processes across the lifecycle. Examination of individual and family well-being using a systems perspective. (Same as CFS 100)

201 Introduction to Women's Studies (3) Surveys the study of women in society. The primary goal is to explore how gender shapes our views and understandings. A further goal is to explain how class, race, ethnicity and age shape the female experience historically and across cultures. The relationship between cultural definitions of feminine behavior and the reality of women’s lives, roles in work, the family, the arts, politics and the sciences is examined. (Same as IDST 201)

208 Marriage and Family (3) The relationships of the family structure to social organization. Particular emphasis focused on the family historically, mate selection, marital adjustment, marital happiness and divorce in a changing society. (Same as SOC 208)
220 Understanding Human Diversity and Oppressed Populations (3) Focuses on the dynamics and consequences of discrimination, economic deprivation and oppression on people of color, women, gay and lesbian persons. Other populations at risk are examined and distinguished by age, ethnicity, culture, class and physical or mental ability. Exploration of personal and professional beliefs, values, roles and norms of culturally different clients and the use of culture in formulating appropriate intervention. (Same as SWRK 220)

231 Interpersonal Communication (3) Study and practical application of principles of communication in face-to-face human interactions. General communication, self-awareness, perception, conflict, listening and interviewing. (Same as COMM 231)

300 Clothing and Human Behavior (3) Functional and sociocultural aspects of dress and adornment in world cultures. Historical, technological and economic influences. (Same as TCFM 300)

303 Family Relationships (3) Factors affecting relationships within families throughout the life cycle. Focus on current lifestyles, changing family forms, cultural diversity and theoretical perspectives. (Same as CFS 303)

304 Women in American History (3) Explores the lives of American women through the prism of class, race and ethnicity—in relationship to each other, to their families, to their work at home and in the public sphere and to their influence on American society and culture. Beginning with the European settlement of North America and continuing until the present, women's history will be woven into a presentation of the American past. (Same as HIST 303)

341 Men and Women: Gender Roles in American Society (3) An examination of how gender is socially produced and the implications of gender for individuals, social processes and social structure. Prereq: SOC 201. (Same as SOC 341 and ANTH 341)

350 Women in the Arts (3) A specialized study of women artists and their work in a historical context. Issues impacting the role of women artists, women as art subjects and the question of a feminine aesthetic will be analyzed. (Same as ARTH 350)

351 Women Writers: Gender, Race and Class (3) A historical survey of women writers, including contemporary writers, which focuses on women writers’ concern with and presentation of issues such as race, ethnicity, religion and class. (Same as ENGL 350)

370 Psychology of Women (3) This course concerns psychological approaches to studying women. It examines relevant theory and research. Topics include identity and self-concept, relationships and power, sexuality, parenting, work, mental health and women of color. (Same as PSYC 370)

480 Topics in U.S. History: [Topic Title] (3) Classes in one or more of the following areas: (a) interdisciplinary approaches to historical periods and (b) specialized topics suitable for in-depth study. May be repeated for credit (with different topic). Only six hours of undergraduate topics courses (460, 470, 480 or 490) can be counted toward the major or minor. Not regularly offered. (Same as HIST 480 when topic offered is on gender issues in history.)

495 Comparative Family Systems (3) An examination of families both cross-culturally and historically. Attention is directed to understanding the variation and similarities in family structures, marital arrangements, premarital relations, gender roles and socialization. Prereq: SOC 201. (Same as SOC 495 and ANTH 495)

496 Topics [title TBA] in Gender and Cultural Studies (3) Special topics in gender and cultural studies issues in literature. May be repeated with variation in topic. (Same as ENGL 495 when topic offered is on women’s literature and issues.)

Zoology (ZOOL)

201 Human Anatomy and Physiology (4) An introductory course surveying the structure and function of the organ systems of man with major emphasis on the coordinated functioning of the human body. Three one-hour lectures and one two-hour lab. ZOOL 201 may not substitute for ZOOL 251. Student cannot receive credit for both ZOOL 201 and ZOOL 251. Prereq: BIOL 110 or 140 or MBIO 251.

251 Human Anatomy and Physiology I (4) (TBR: BIOL 2010) This course provides a brief introduction to basic chemistry and the fundamentals of cell
biology and focuses on the structure and function of the integumentary, skeletal, muscular and nervous systems. Three one-hour lectures and one two-hour lab.

304 Comparative Vertebrate Anatomy (5) Classification and phylogeny of the vertebrates, followed by a detailed study of integumentary and skeletal systems of a variety of forms. Dissections of dogfish shark, necturus and cat, with emphasis on digestive, respiratory, circulatory, urogenital and nervous systems. Three one-hour lectures and two two-hour labs. Prereq: BIOL 110-120 or 130-140.

315 Invertebrate Zoology (4) Phylogeny, morphology and ecology of invertebrate animals exclusive of insects and parasites. This course requires field work involving physical activity. Three two-hour lecture/lab classes. Prereq: BIOL 110-120 or 130-140.

319 Mammalogy (3) Biology, natural history, classification and identification of mammals with emphasis on the local fauna. This course requires field work involving physical activity. Two one-hour lectures and one three-hour lab. Prereq: BIOL 110-120 or 130-140.

320 Ichthyology (3) Identification, classification, distribution, life history and economic importance of fishes. This course requires field work involving physical activity. Two one-hour lectures and one three-hour lab. Prereq: BIOL 110-120 or 130-140.

321 Ornithology (3) Introduction to external structure, classification, migration, behavior and phylogeny of birds. Most lab periods are spent studying birds in the field. This course requires field work involving physical activity. Two one-hour lectures and one three-hour lab. Prereq: BIOL 110-120 or 130-140.

322 Herpetology (3) Introduction to the study of reptiles and amphibians including structure, classification, distribution, ecology, behavior and identification. Emphasis is on local species. This course requires field work involving physical activity. Two one-hour lectures and one three-hour lab. Prereq: BIOL 110-120 or 130-140.

325 Economic Entomology (3) A study of the biology, ecology and management of local arthropods with emphasis on insects. Emphasis on both the negative impact arthropods have on man's health, his agricultural practices and problems associated with upkeep of dwellings and on the positive aspects of arthropods as food sources, pollinators, decomposers and biological control agents. This course requires field work involving physical activity. Two one-hour lectures and one two-hour lab. Prereq: BIOL 110-120 or 130-140.

326 (526) Aquatic Macroinvertebrates (3) An introduction to the study of freshwater macroinvertebrates including structure, classification, ecology and identification. This is a field course taught at the Reelfoot Lake Research and Teaching Center in Samburg, TN. The course requires field work involving physical activity. Three weeks (M-F) of full day, combined lecture and lab sessions. Prereq: BIOL 110-120 or 130-140.

328 Natural History of the Vertebrates (3) Life modes of various types of vertebrates. Identification of common, local and American species, distributions, life histories and ecology. Recommended for students in elementary or secondary education or biology students who do not intend to take other vertebrate morphology courses. This course requires field work involving physical activity. Two one-hour lectures and one three-hour lab. Prereq: BIOL 110-120 or 130-140.

352 Human Anatomy and Physiology II (4) (TBR: ZOOL 251) This course focuses on the structure and function of the endocrine, reproductive, digestive, respiratory, excretory, lymphatic, immune and cardiovascular systems, with additional emphasis on blood, metabolism and the maintenance of fluid and electrolyte balance. Three one-hour lectures and one two-hour lab. Prereq: ZOOL 251 or instructor's permission. Students may not receive credit for both ZOOL 252 and ZOOL 352.

440 (640) General Parasitology (4) A study of animal parasites. Emphasis on morphology, taxonomy, life history, ecology and host-parasite relationships. Three two-hour lecture/lab classes. Prereq: BIOL 110-120 or 130-140.
441 (641) Animal Ecology (3) Basic principles of animal ecology and population biology. Prereq: BIOL 110-120 or 130-140.

442 (642) Animal Ecology Laboratory (1)
Lab studies of the methods of animal ecology. This course requires field work involving physical activity. One two-hour lab. Coreq: ZOOL 441.

443 Animal Behavior (3) A course designed to expose students to the ecological, evolutionary, physiological and psychological aspects of animal behavior in a wide variety of animals. Lab exercises with animals in their natural environment or in a lab setting focus on observational and experimental techniques used in current animal behavior research. This course requires field work involving physical activity. Two one-hour lectures and one two-hour lab. Prereq: BIOL 110-120 or 130-140.

461 (661) Histology (3) The study of characteristics and properties of primary normal animal tissues and special histology dealing with the arrangement and adaptations of tissues in organs. One one-hour lecture and two two-hour labs. Prereq: BIOL 110-120 or 130-140.

710 Entomology for Teachers (4) A survey of the class Insecta including morphology, physiology, ethology, ecology and taxonomy of insects. Both field and lab experiences in collecting, identification and collection maintenance are included.