The University of Tennessee at Martin
Description of Courses

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.

ACCT  Accounting
AGEC  Agricultural Economics
AGED  Agricultural Education
AGET  Agricultural Engineering Technology
AGRI  Agriculture
ANSC  Animal Science
ANTH  Anthropology
ART   Art
ARTE  Art Education
ARTH  Art History
ASTR  Astronomy
ATRN  Athletic Training
BADM  Business Administration
BCHE  Biochemistry
BIOL  Biology
BLAW  Business Law
BOT   Botany
BUED  Business Education
CFS   Child and Family Studies
CHEM  Chemistry
CI    Criminal Justice
COMM  Communications
CRMG  Consumer Resource Management
CSCI  Computer Science
DANC  Dance
DSED  Driver Safety Education
ECON  Economics
EDAS  Educational Administration and Supervision
EDEV  Educational Evaluation
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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 its equivalent.

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 Strategic Cost Management (3) Strategic 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 and standard costing are examined to support an understanding of Just-In-Time and Activity Based Systems, continuous improvement, quality measurements and the theory of constraints, among others. Emphasis is on how cost measurement systems, with their performance evaluation and reward systems, encourage efforts to achieve an organization’s strategic goals. 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: Grade of C or better in ACCT 302 and MATH 210.
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 Strategic Cost Management (3) A continuation of ACCT 321 with an emphasis on process costing, support-service costs, long-term capital investment decisions, variance analysis, performance analysis, transfer 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 Corporate and Partnership Taxation (3) Advanced course in taxation with emphasis on corporations, partnerships, estates, trusts, gifts, valuation and liquidity problems, tax administration and practice. Prereq: Grade of C or better in ACCT 202.

441 Advanced Financial Accounting (3) Accounting practices and theories for business combinations and cash flows. 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 particular attention to internal control and the audit trail. Students are required to write case reports and give oral presentations. Prereq: At least a grade of C in the following: ACCT 311 or ACCT 321, and INFS 310.

480 Internship in Accounting (3) Supervised accounting work experience in business establishments, institutions, or other organizations. Students are required to write reports and give oral presentations. May not be used to meet upper division accounting elective requirements. Prereq: Senior standing and approval of department chairperson and accounting faculty. Pass/Fail.

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.

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.

710 Business Analysis Using Financial Statements (3) Introduction to business analysis using financial statements. After a review of the basic statements, students are exposed to concepts and techniques of Financial Statement Analysis. Emphasis is on financial statement information to enhance decision making for a variety of users (management, corporate boards, equity investors, financial analysts, lenders, and regulators).

711 Accounting for Managerial Decisions (3) 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.
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 441 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.

780 Internship in Accounting (3) Supervised accounting work experience in business establishments, institutions, or other organizations. Students are required to write reports and give oral presentations.

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 ÒIÓ grades while enrolled in ACCT 790.

791 Accounting Theory (3) Study of effective or proposed promulgations of accounting standards setting bodies.

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.

210 Computer Applications in Agribusiness (3) An introduction to the use of computers in agribusiness applications with emphasis on mastering word processing, spreadsheet, graphics and financial software, statistics and mathematical programming. Course includes the use of computer gaming techniques for instruction in agribusiness. Prereq: CSCI 201 or permission of instructor.

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. Prereq: AGEC 110.
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, used equipment appraisal, retail contracts, government bids, product support, cooperative advertising, adopting new technologies, leasing and rentals, use of industrial guides, group selling, specification selling, personal selling, and technical business plans. How to apply technical and scientific skills toward agricultural and engineered product selling. Prereq: CHEM 121, BIOL 110.


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 final presentation of an agribusiness marketing plan. The product can be used for competition at the local and national levels of the National Agribusiness Marketing Association. Includes trips to Memphis and the National Convention. 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.

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.


701 Research or Internship in Agricultural Economics (5) This will be either: 1) a major research project related to agricultural economics, resulting in a comprehensive research report; or 2) a supervised work experience in agricultural economics for a minimum of three months, resulting in weekly reports, a final comprehensive report, and a report from the immediate supervisor.

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 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, scale of operation of agricultural firms including risk and uncertainty associated with agricultural production. Prereq: MATH 160 and ECON 202 or instructor’s approval.

**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 AGED310.

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 TCED401 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.


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.


370 Agricultural Mechanics Shop (3) Organizing and planning agricultural shops. Tools, equipment and fabrication methodologies for wood, metals, and other common materials. One 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 minimum GPA of 2.75.

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 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. Prereq: CSCI 201 or consent of instructor.

701 Research or Internship in Agricultural Engineering Technology (5) This will be either: 1) a major research project related to agricultural engineering, resulting in a comprehensive research report; or 2) a supervised work experience in agricultural engineering for a minimum of three months, resulting in weekly reports, a final comprehensive report, and a report from the immediate supervisor.

710 Safety and Ergonomic Sciences in Agriculture (3) Designing, fitting, 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.

781 Agricultural Operations Management Seminar (1) Fundamentals of operations management; mathematical programming, decision theory, stochastic processes, and their applications in agriculture; emphasis on problem formulation, solution strategies, and computer software packages. Topics include agricultural production, strategy, production planning, master scheduling, inventory control, forecasting, material requirements planning, just-in-time systems, quality management, and agricultural technologies.

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 science and technology applications within agriculture and natural resources management.

230 International Travel Studies in Agriculture and Natural Resources (1-3) International travel course to study topics in Agriculture and Natural Resources. Requires travel to another country, oral and written reports. May be repeated one time for credit. (Same as NRM 230) Pass/Fail grading basis. Prereq: Instructor’s approval
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. Prerequisites: 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 (6, 8) Minimum of one semester (or two semesters for eight 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.

441 (641) Interpretation of Agricultural Research (3) Statistical techniques for analysis and interpretation of agricultural data. Descriptive statistics, inference, tests of hypotheses, confidence intervals, analysis of variance, mean separation, linear regression and correlation. Prereq: MATH 160 or 210.

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)

481-482 (681-682) Seminar (1, 1) Discussion of special topics in agriculture. Review of literature on agricultural problems. Oral and written reports. Prereq: Dean’s approval.

720 Research or Internship in Agriculture (5) This will be either: 1) a major research project related to agriculture resulting in a comprehensive research report; or 2) a supervised work experience in agriculture for a minimum of three months, resulting in weekly reports, a final comprehensive report, and a report from the immediate supervisor.

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.

741 Statistical Methods in Agriculture (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.

**Animal Science (ANSC):**

110 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.
119 Introduction to Animal Science Laboratory (1) Provides a laboratory 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.

120 Basic Equitation (1) An introduction to basic horsemanship. Designed for students with limited experience in the handling of horses. Includes instruction in grooming, care of tack, saddling, bridling, and mounting. Development of basic riding skills at the walk, trot and canter.

195 Equestrian Team (2) Development of equitation skills for students through practice and intercollegiate competition. Participation on the Equestrian Team is limited to students that can ride safely in a group at the beginner level in western or hunt seat disciplines. Students in the course must be in good academic standing, qualify for national IHSA membership, and complete in IHSA competition in at least one riding discipline during the semester. Students must be willing to travel on weekends. Students will also be required to help with equine related activities on campus. May be repeated for credit.

210 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.

230 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.

240 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.

260 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.

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 Martin Agricultural Experiment Station 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 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 and CHEM 121.

340 Basic Animal Nutrition (3) Biochemical and physiological aspects of animal nutrition including digestion, absorption, and metabolism of carbohydrates, fats, proteins, minerals, and vitamins. Nutrients, nutritive value, and utilization. Role of feed additives and growth stimulants. Students will be required to write reports and give oral presentations. Prereq: CHEM 122 and BIOL 120.

350 Applied Animal Nutrition (3) Application of the principles of nutrition to animal feeding. Feeding systems in their relationship to economic efficiency. Nutrient requirements of domestic animals and applicable ration formulation as related to nutrient availability and cost feasibility. Two one-hour lectures and one two-hour lab.

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 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 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 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 laboratory. 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 origin of common breeds of meat animals. Investigations into 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, 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, 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 laboratory. 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 farms and related industries. Two one hour lectures and one three hour lab. Prereq: junior standing in Animal Science or Pre-Vet options or permission of instructor.


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 laboratory. 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.

201 People and Culture of Asia (3) An ethnological study of cultural areas on the Asian continent.

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) Gender and 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)

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, ANTH 101, or permission of instructor. (Same as SOC 404)

434 (634) Community, Society, and Change (3) Impact of change on community and society, contrast between urban and rural lifestyle, problems and promises of modernization. Prereq: SOC 201. (Same as SOC 434/634)

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)

497 (697) Senior Seminar (3) Readings, discussion of problems, and presentation of papers. Prereq: SOC 201. (Same as SOC 497/697)
Art (ART):

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

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, 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.

305 Photography (3) Introduction to camera and darkroom techniques for small format, black and white photography. Lecture and lab. Same as COMM 341.

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 and 241.

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.

320 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.

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. Prereq: ART 351.

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 312.
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) Use of fundamental printing processes such as silk screening and block printing on various materials. Prereq: ART 241.

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 handbuilding, throwing, glaze techniques, calculations and firing. Research in ceramics history and criticism. Prereq: ART 335.

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, 242.

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

**Art Education (ARTE):**

211 Introduction to Teaching Art (1) A comprehensive view of art teaching as a profession including requirements, challenges, and opportunities. Includes 10 clock hours of clinical laboratory 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. Prereq: Admission to Teacher Education.


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) The development of visual art in Western culture history around the world studied through representative artists and works. 210: Paleolithic era through the Renaissance (16th Century). 211: Baroque period (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.

**Astronomy (ASTR):**

201-202 Astronomy (4, 4) An introduction to astronomy with a laboratory 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 of lecture and two hours of lab.

**Athletic Training (ATRN):**

300 (500) Prevention of Athletic Injuries (4) Development of a basic understanding of athletic injuries to include pre-participation examination guidelines, risk factors, strength, endurance, and body composition testing, environmental conditions, maintenance of athletic equipment and facilities, protective devices and taping. Lab included. Prereq: BIOL 110, ZOOL 201 or 251. 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. Lab included. Prereq: ATRN 300, ZOOL 201 or 252 or permission of instructor. Taught only in the spring.

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. Lab included. Prereq: ATRN 301, ZOOL 201 or 252 or permission of instructor. Taught only in the fall.
310 Athletic Training Clinical (1) Supervised study and experience with a certified athletic trainer at UTM Training Room or an approved clinical site. Application must be approved one semester in advance. Prereq: Admission to the athletic training program.

311 Athletic Training Clinical (1) Supervised study and experience with a certified athletic trainer at UTM Training Room or an approved clinical site. Application must be approved one semester in advance. Prereq: ATRN 310.

312 Athletic Training Clinical (1) Supervised study and experience with a certified athletic trainer at UTM Training Room or an approved clinical site. Application must be approved one semester in advance. Prereq: ATRN 311.

313 Athletic Training Clinical (1) Supervised study and experience with a certified athletic trainer at UTM Training Room or an approved clinical site. Application must be approved one semester in advance. Prereq: ATRN 312.

400 (600) Therapeutic Exercise (3) Development of the knowledge and the application of programs and techniques for rehabilitation of athletic injuries. Lab included. Prereq: ATRN 302 and ZOOL 201 or 251 or permission of instructor. Taught only in the spring.

401 Therapeutic Modalities (3) Development of knowledge, application, and use of therapeutic modalities in the treatment of athletic injuries. Lab included. Prereq: ATRN 400 and ZOOL 201 or 251 or permission of instructor. Taught only in the fall.

402 Health Care Administration/Professional Development and Responsibility (3) This course is geared toward the student who wishes to pursue the National Athletic Trainers’ Association Board of Certification exam; 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 401 or permission of instructor. Taught only in the spring.

491 Athletic Training Internship (3) Supervised study and experience with a certified athletic trainer at UTM Training Room or an approved clinical site. Application must be approved one semester in advance. Prereq: ATRN 313.

492 Athletic Training Internship (3) Supervised study and experience with a certified athletic trainer at UTM Training Room or an approved clinical site. Application must be approved one semester in advance. Prereq: ATRN 491.

Biochemistry (BCHE):


419 (619) Biochemistry Laboratory (1) Laboratory 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) An introductory course that emphasizes plant and animal cell structure, cellular processes, and genetics. Three one-hour lectures and one two-hour lab.

120 Introductory Plant and Animal Biology (4) 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. Prereq: BIOL 110.

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

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 Òwriting across the curriculumÓ requirement.) Prereq: BIOL 110-120.

336 Introductory Genetics (3) Basic concepts of Mendelian and molecular genetics. Prereq: BIOL 110-120.

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 Òwriting across the curriculumÓ requirement.) Two one-hour lectures and one one-hour recitation. Prereq: BIOL 110-120; 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. Prereq: Major in biological science, secondary education major 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. Prereq: Major in Wildlife biology and junior standing.

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. Prereq: Major in Wildlife biology and junior standing.

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, CHEM 121-122.


431 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 430.

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, 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, CHEM 342 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.

451-452 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.

462-663 (662-663) Special Topics in Biology (1-3, 1-3) Intensive lectures and/or laboratory work on special topics in biology. Prereq: Junior standing and instructor’s approval.

475 Field Investigations in Biology (3) Field work in selected environments with emphasis placed upon the interaction of the flora and fauna with 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.

**Botany (BOT):**

301 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 hours lecture and two hours lab. Prereq: BIOL 110-120.

302 Plant Morphology (3) A study of the major groups of photosynthetic organisms with respect to comparative anatomy, reproductive patterns, development, and phylogenetic relationships. Two hours lecture and two hours lab. Prereq: BOT 301 or permission of instructor.

303 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.

421 (621) 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 and CHEM 121-122.

431 (631) Plant Ecology (3) Relations of plants to their environment with emphasis on climate and biotic factors influencing their structure, growth, behavior, and distribution.

432 (632) Plant Ecology Laboratory (1) Laboratory 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)
444 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.

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.

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 (3) 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 (3) 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: At least a 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. Prereq: BLAW 301 or equivalent.
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 legal and regulatory controls that impact business dealings with government agencies, consumers, employees, competitors, investors, and the general public. Students will be helped to identify and address major legal and ethical issues to avoid potential liability and to maintain ethical integrity in a competitive global marketplace.

Chemistry (CHEM):

100 Basic Concepts of Chemistry (4) A survey of basic chemistry in the context of real-world societal issues, such as air pollution, acid rain, energy, etc. Students should not attempt CHEM 100 unless the results of mathematics testing indicate placement in MATH 080 or a higher level course. CHEM 100 may precede, but may not substitute for, CHEM 121. Three lecture hours and one three-hour laboratory.

121-122 General Chemistry (4, 4) Elementary concepts and applications of the chemical sciences. Three lecture hours and one three-hour laboratory. Students should not attempt CHEM 121 unless mathematics testing results indicate placement in MATH 140 or a higher level course. CHEM 121 is prerequisite to CHEM 122.

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, 122.

312 Food Chemistry (4) The emphasis of the course is on the composition of foods and the changes that occur when they are subjected to processing. The basic chemistry of food constituents including proteins, enzymes, vitamins, carbohydrates, lipids, colorants, flavors and fermentation products are considered. The physical and chemical properties of the important constituents of foods along with basic chemical methods of food analysis are included in the laboratory. Three lecture hours and one three-hour laboratory. Prereq: CHEM 310 and 319. Does not count toward a major or minor in chemistry.

319 Organic and Biochemistry Laboratory (1) Laboratory exercises related to topics covered in CHEM 310. Laboratory 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 laboratory portion of CHEM 341. Coreq: CHEM 310.


341-342 (541-542) Organic Chemistry (4, 4) A study of the compounds of carbon. Three lecture hours and one three-hour laboratory. Must be taken in sequence. Prereq: CHEM 121, 122.

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.

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 labs. Prereq: CHEM 320 and credit for, or registration in, CHEM 351 or CHEM 352.

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 342 and CHEM 320. 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 laboratory. Prereq: CHEM 320 and CHEM 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 CHEM 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 UTM with 2-1/2 days of intensive instruction and laboratory work utilizing facilities of Oak Ridge Associated Universities. A final written report is required. Prereq/Coreq: CHEM 352.

460 (660) Advanced Synthesis (3) Laboratory 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 CHEM 342.

480 Special Topics (1-3) The courses will consist of intensive lectures and/or laboratory 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.

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

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.

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 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, laboratory experience. Prereq: Six 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.

755 Advanced Laboratory Practicum in Child Development (3) Guidance of children, program development, implementation, and evaluation.

**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.

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.

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.

250 Introduction to Broadcasting (3) Introduction to radio and television fundamentals with laboratory 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/covering 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 COMM 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.

323 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.

324 Introduction to Interactive Multimedia (3) A merger of personal computer and audio-video production techniques to create interactive multimedia products. Use of computer authoring applications and other resources to create interactive multimedia products for education, entertainment, corporate communications, Internet commerce and other forms of marketing communication.

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

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

327 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.

328 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.

329 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, decisionmaking role. Prereq: COMM 326 and 328.

332 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.

340 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.

341 Photojournalism (3) Introductory and intermediate instruction in black and white photographic techniques, developing, printing, and caption-writing. Also includes an overview of digital/computer techniques. Photographic assignments will give students experience in reporting with a still camera. Lecture and lab.
350 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.

360 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.

365 EFP/ENG (3) A study of and practical experience in the various aspects of small-format videotape recording and editing procedures. Additionally, a survey of the application of video production in Electronic News Gathering (ENG) and Electronic Field Production (EFP) for commercial and noncommercial television production industries. Prereq: COMM 360.

370 Television News (3) Writing and producing TV news stories and newscasts. Intensive field and lab work with electronic news gathering (ENG) cameras and editing equipment. Lecture and lab. Prereq: COMM 315 and COMM 360.

381 Practicum in Broadcasting (1) A lecture/lab providing supervised experience in radio and/or television. Pass/Fail. May be repeated for a maximum of 3 hours credit. Prereq: COMM 350 or COMM 360.

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.

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.

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 Television Producing and Directing (3) Theory and practice related to producing and directing television programming. Emphasis on accepted TV directing methodology and the producer’s role in developing television programming. Program development from initial concept through the completed program. Lecture and lab. Prereq: COMM 360.

471, 472 Independent Study (3, 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 a 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.

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: Senior standing.

**Computer Science (CSCI):**

200 Introduction to Computer Science and BASIC (3) Concepts of computer systems, communications, networks, operating systems, systems software and digital media. Beginning programming using Visual Basic. Intended for students proficient in the use of computer applications or students desiring an introduction to programming. Credit may not be received for both CSCI 200 and CSCI 201. Credit does not apply to computer science major or minor requirements.

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 may not be received for both CSCI 200 and CSCI 201. Credit does not apply to computer science major or minor requirements.

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. Prereq: CSCI 221.
230 FORTRAN Programming (3) Concepts of the FORTRAN language including file handling techniques. Prereq: MATH 160, 185, or 251. (Same as previously deleted MATH 230)

231 Computer Programming for Engineers (3) Design and implementation of computer programs for engineering problem solving, algorithm development, basic statistical and numerical methods. Intensive programming in the ÖCÖ language. Introduction to program constructs in structured BASIC, FORTRAN, and C++. Coreq: MATH 251.

250 COBOL Programming (3) Introduction to Common Business Oriented Language using structured methodology. Problem solving directed toward business applications. Prereq: CSCI 200 or CSCI 201 or CSCI 221 or departmental approval.

260 RPG Programming (2) Report Program Generator with applications and programs oriented to commercial fields. Prereq: CSCI 200 or CSCI 201 or CSCI 221 or departmental approval.

290 Special Topics in Computer Science (1-3) Lectures and/or laboratory work relating to specialized topics in computer science. Course may be repeated with total credits not to exceed six (6) hours. May be offered on a pass/fail basis. Prereq: Instructor’s approval.

301 Discrete Systems (3) Logic, sets, relations, functions, Boolean algebra, logic gates, matrices, axioms and proof techniques, induction, graph theory, trees and automata. Prereq: MATH 140 or 160 or 185 or 251. Credit may not be received for both MATH 241 and CSCI 301.

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 the language C++, data types, pointers, structures, unions, prefix, infix and postfix operators, flow of control, passing parameters, static and automatic variables, recursion, external declarations, and separate compilation, functional programming, the C preprocessor and macros. Creation of software tools and utilities, development of user applications. 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 200 or 201; CSCI 221 or 250.

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 CSCI 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 CSCI 325.


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.

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, multiprogramming and multi-processing, inter-process communication, includes the study and use of several operating systems. Prereq: CSCI 320 and CSCI 325.
490 (690) Special Problems (1-3) Individual projects for students exhibiting special interests and abilities in selected areas. Maximum of three hours applicable to minor requirements. Course may be repeated with total credits not to exceed six hours. Prereq: Departmental approval.

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: INTD303 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 through interaction with a computerized software application package simulating the criminal justice system. This course is a prerequisite to all other criminal justice courses.

210 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.

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 dilemma in the Criminal Justice System will be covered. Prereq: CJ 200, 210.

310 (510) Criminal Investigation (3) An intensive examination of the scientific basis for criminal investigative procedures including theory, case preparation, specific techniques for interpreting and evaluating physical evidence, and problem areas encountered when conducting a criminal investigation in our society. Extensive reading and writing required. A research project utilizing library resources and computer based software applications required. Prereq: CJ 200 and 210 with minimum grade of C in both.

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 210 with minimum grade of C in both.

364 (564) Corrections (3) A survey of correctional methods including probation, parole, other community based corrections, and correctional institutions. (Same as SOC 364/564)

370 Juvenile Justice Process (3) Law and procedure in the juvenile justice system. (Same as SWRK 345)

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 210 with minimum grade of C in both.

411 (611) Special Topics (1-3) Selected topics of current interest and importance. Prereq: Instructor’s approval. 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.

420 (620) Criminal Evidence (3) The organization and presentation of evidence in a courtroom setting including an examination of the law of evidence.

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 210 with minimum grade of C in both.
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.

**Dance (DANC):**

110-111 Understanding Dance (3, 3) General survey of the development of dance as an art form from primitive times to the present.

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.

240 Choreography I (2) Use of rhythmic, spatial, and dynamic elements in designing dance movements. Current choreographic approaches. Prereq: Proficiency in dance and instructor’s approval.

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.

351, 451 Recital (2, 2) Special studio performance of individual choreographic project. May be repeated for credit.

390 (590) Dance Pedagogy (2) Concepts, methods, materials, and practice in teaching dance. Three studio hours per week. Prereq: Instructor’s approval.

401 (601) Special Projects in Dance (2) Directed individual study. May be repeated for credit.
410 (610) Dance Improvisation (2) Principles of space, time, shape, and motion approached through improvisation within selected parameters. Three studio hours per week. May be repeated for credit. Prereq: DANC 120 or 320, 130 or 330, or instructor's approval.

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.

**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.

**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 201-202.


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 201-202.


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 201-202.

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 201-202.

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 ECON 311.

471-79 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 (3-9) Supervised work experience in business establishments, institutions, or other organizations matched to the student's curriculum. Prereq: Senior standing or the chair's approval.

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) 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 MBA or MAc 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 MBA or MAc 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 6 semester hours. May not be counted toward MBA or MAc 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.

730 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).

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

750 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.

760 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.

765 Topics in Essential Skills for School Leaders [Topic Title] (1-3) A series of one credit hour seminars and symposiums used to develop and improve skills in the following areas: time management, group dynamics, writing/communicating, decision-making, school safety, assessment, planning, etc. May be repeated for credit (with different topic) for a maximum of six hours. Only six hours may be applied toward a graduate degree in education. May be offered on pass/fail basis for Continuing Educational Units.

770 Internship in School Leadership (3) The student completes approved administrative assignments under the mentorship of a practicing organizational leader in a selected school system.
771 Field Studies in EDAS: Secondary Principal (3) The student completes approved administrative assignments with selected school systems.

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

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

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

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

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

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

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

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

**Educational Evaluation (EDEV):**

461 (661) 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.

710 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. Prereq: EDEV 710.

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 instrumental conditioning, social learning theory and related topics, and cognitive theories applied to school environments. (Same as TCED 712)

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. (Same as TCED 716.)

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.

725 Theories and Techniques of Counseling (3) An exploration of counseling theory and techniques applicable to children/adolescents/adults. The components and nature of the counseling relationship, facilitating personal growth in individuals developing counseling interventions or plan or treatment for individuals, and individual and group approaches as related to counseling in a school environment are emphasized.

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. Topic of course investigation includes the study of leadership, communication skills, stress management, and career development.

750 Personal Adjustment (3) Examines mental health principles for the classroom. Includes a consideration of principles of healthy living, personality development, interpersonal relationships, sociocultural variables and adjustment, and gender issues.

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 disorders. A broad spectrum of therapeutic approaches to treatment such as IEP’s, parent education and training, teacher education and training, social skills education and training, and self esteem education and training that can be utilized in educational settings and counseling/consultative activities are emphasized.
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 Agency/Mental Health Counseling (3) A survey of the history, organization, management, and delivery of community agency/mental health services. The role and scope of practice, ethics, and the JAOCHAH standards.

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 counselor’s 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.

787 Internship in School Counseling (3) Includes 600 hours of supervised experience in Pre K-6 (300 hours) and 7-12 (300 hours) 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.

788 Internship in Mental Health/Community Counseling (3) Includes 600 hours of supervised experience in an appropriate mental health agency, or community counseling setting. Prereq: EDPG 716, 720, 725, 730, 740, 750, 760, 775, 783, and 785. Consent of course instructor and on-site supervisor. Application for internship required.

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, 750, 760, 775, 783, 785. Consent of course instructor and on-site supervisor.

792 Supervised Practicum in a Non-School Setting (3) For students seeking a community field experience other than a school setting. Prereq: EDPG 710, 715, 720, 727, and consent of faculty advisor.

**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. Prereq or Coreq: ELED/SEDU 781 for Initial Licensure candidates.

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 data bases 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: HLRN 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.

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 3 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.

791-792 Master Research Project, K-8 (2, 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: for 791--EDEV 710 and EDFN 710; for 792--ELED 791. May repeat enrollment. P/N only.

793 Student Teaching Grades K-4 (5) 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 (5) 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 Engineering (3) Historical review of the interaction between society, technology, and engineering.

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 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.

210 Engineering Design (2) Design teams conduct a design project that incorporates problem definition and information research. Development of alternative solutions, merit analysis, decision presentation, build, testing and redesign are included; written and oral reports will be given. One lecture hour 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; applications including axially loaded members, torsion of circular shafts, bending of beams. Shear and moment diagrams, combined stress. Three lecture hours. Prereq: MATH 252 and ENGR 121.

231 Electronics I (3) Gate-level digital electronics. Combinational and sequential logic, hardware reduction strategies, Boolean algebra, digital memories, programmable devices, Implementation with integrated circuits. Student cannot receive credit for both ENGR 330 and ENGR 231. Two lecture hours and one three-hour lab. Prereq: ENGR 112.

232 Circuit Analysis I (4) Basic principles of I. L. and C circuit components. DC and AC circuit analysis techniques. Ohm's law, Kirchhoff's laws, mesh and nodal analysis, and circuit theorems. Steady-state AC phasor analysis, including power and power factor. Operational amplifiers, AC/DC machines, and Transformers. Students cannot receive credit for both ENGR 230 and ENGR 232. Three lecture hours and one three-hour lab. Prereq: MATH 252.

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.

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. Prereq: 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 students. Prereq: At least junior standing and approval of the Department Chair.

315 Engineering Analysis I (3) Formulation of mathematical models, analysis and computer solutions to intermediate level engineering problems. Emphasis will be placed on classical solution techniques of ordinary differential equations and numerical methods. State-of-the-art engineering analysis software will be used in the design environment. Three lecture hours. Prereq: MATH 252. Coreq: ENGR 241.

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 and 311. Coreq: ENGR 315.

331 Electronics II (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. Two lecture hours and one three-hour lab. Prereq: ENGR 231, 232.

332 Circuit Analysis II (3) Transient analysis, Two port systems, amplification, filtering, Laplace transform analysis of circuits, introduction to non-linear circuits, frequency domain representation, magnetically coupled circuits. Two lecture hours and one three-hour lab. Prereq: ENGR 232.


350 Construction Surveying (3) Construction surveys. Mensuration, leveling, traversing, topographic mapping. Two lecture hours and one three-hour lab. Coreq: MATH 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 350.

370 Vibrations (4) Modal parameter representation of single and multi-degree of freedom systems. Computer-aided experimental design and troubleshooting approach involves data acquisition, digital Fourier analysis, and graphic display. Techniques to determine and modify system characteristics for impact, sinusoidal and random excitation. Three lecture hours and one three-hour lab. Prereq: ENGR 241 and 315.

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.

410-411 Senior Research/Thesis (1, 3) Working with their research project advisor, students will prepare and present a research proposal, conduct appropriate research and present the result. The final thesis oral presentation will be open to the university and industrial community. Prereq: ENGR 313, senior standing and approval of the student's advisor.

413 Engineering Management (3) Human, quality, organizational, legal, and ethical aspects of the engineering profession. Three lecture hours. Prereq: junior standing and ENGR 210.

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.

440 Energy Systems (3) Availability and second law analyses: Vapor power cycles, gas power cycles, refrigeration cycles, nozzles and renewable energy systems. The analysis of reactive gas mixtures, hydrocarbon fuels and combustion. Emphasis will be placed on the solutions to open-ended design and economic problems. Three lecture hours. Prereq: ENGR 311, 341 and INEG 380.

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, and plate girders. Emphasis on connections. Use of load and resistance factor design (LRFD) code. Design of typical steel structure including connections. Use of computer analysis. Three lecture hours. Coreq: ENGR 231.

460 Microprocessors and Computer Organization (3) Computer organization, assembly language programming, memory hierarchy, digital interfacing, use of microprocessors in common consumer applications, study of contemporary general and special purpose architectures. Two 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 analog and digital feedback control system design for integrated systems. Includes block diagrams, transfer functions, state equations, stability, steady state error, time response, Bode design, root locus design, and design of lead/lag compensators and PID controllers. Three lecture hours. Prereq: ENGR 241 and ENGR 316.

463 Electrical Power Systems (3) Applications associated with electrical utility and industrial organizations. Electrical power control methods including voltage regulation, generator allocation, protection schemes. Two lecture hours and one three-hour lab. Prereq: ENGR 316.
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.


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. Four lecture hours. Prereq: ENGR 241 and 315.

473 Machine Design (4) Fundamental principles, including stress analysis, deflection, and stiffness properties of materials and design considerations for static and fatigue strength. Design of mechanical elements including fasteners, weldments, springs, bearings, gears, and miscellaneous elements used in design and maintenance applications. Three lecture hours and one three-hour lab. Prereq: ENGR 220 and ENGR 311. Coreq: ENGR 472.

474 Manufacturing Systems (3) Computer assisted engineering design, computer aided manufacturing, automation systems, modeling, simulation and optimization techniques. Design of tooling, jigs and fixtures for economical production. Two lecture hours and one three-hour lab. Prereq: ENGR 473

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, Electrical (ELEG):**


202 Circuits II (4) Time-varying and alternating currents and voltages. Average and effective values, AC power and power factors. Polyphase networks, elementary transient analysis, magnetically coupled circuits and magnetic circuit concepts, two-port networks. Three hours including lab. Prereq: ELEG 201.

**Engineering, Industrial (INEG):**

310 Production Management (3) An overview to the basic principles, functions and concepts involved in the design, operation, and control of operations in contemporary organizations. Topical coverage includes operations strategy, forecasting, capacity planning, location, production planning, materials management, productivity management, and quality management. Prereq: MATH 210, MGT 301, or junior standing in Engineering. (Same as MGT 310)
312 Introduction to Management Science (3) Introduction to quantitative methods used in business decision making. Topical coverage includes mathematical programming, inventory models, critical path methods, decision theory, and waiting lines. Computer software will be used to analyze application problems in business and economics. Prereq: CSCI 201, MGT/INEG 310. (Same as MGT 312)

330 Quality Design and Control (3) The study of the application of quantitative approaches to the design and control of quality. Topics will include the 7 simple tools, measurement systems, statistical control systems, and design of experiments for multiple process specifications. Prereq: MATH 210 or Junior standing in engineering. (Same as MGT 330)


412 Applied Operations Management (3) Design, operation and control of production and operating systems. Emphasis is on the design, implementation and operation of integrated production and operating systems covering such functions as aggregate planning, master scheduling, inventory planning and control, material requirements planning, production scheduling and control, just-in-time production, capacity requirements planning, and product and process layout designs. Prereq: MGT/INEG 310. (Same as MGT 412)

**English (ENGL):**

080 Developmental English (3) A course designed to prepare students for regular college English. A review of grammar as well as a variety of writing activities. Credit is not counted toward degree requirements.

090 Developmental English (3) A continuation of skills taught in Eng 080 with increasing emphasis upon paragraph construction and essay organization. Credit is not counted toward degree requirements.

111 English Composition (3) 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) 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) English literature from Beowulf through the Neoclassic period. Prereq: ENGL 111-112.

251 British Literary Tradition (3) English literature from the Romantic period to the present. ENGL 251 may be taken before ENGL 250. Prereq: ENGL 111-112.
260 American Literary Tradition (3) American literature from the pre-Colonial period through the Romantic period. Prereq: ENGL 111-112.

261 American Literary Tradition (3) American literature from the Realistic period to the present. ENGL 261 may be taken before ENGL 260. Prereq: ENGL 111-112.

270 World Literature (3) A survey of world masterpieces (excluding American and British writers) from the beginnings through the Renaissance. Prereq: ENGL 111-112.

271 World Literature (3) 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 memoranda, 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.

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.


395 (595) Literature and Film (3) A study of the interrelationships among literary genres, scenarios, and the film form. Assignments include reading the literature as well as viewing films.

401 (601) Studies in British and Commonwealth Writers Since 1660 (3) 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.

420 (620) History of the English Language (3) 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.

425 (625) Advanced Grammar (3) Study of system and pattern implicit in the English language. Basic sentence patterns, inflections, determiners, parts of speech, expansions, complementation, and usage.

440 (640) Southern Literature (3) A study of humorists, local colorists, and realists in relation to the Southern tradition in literature from William Byrd to the present.

445 (645) The American Novel to Faulkner (3) Representative novels from the beginnings to Faulkner, with attention to the historical development of the genre.

450 (650) Introduction to Literary Criticism (3) The concepts, terminology, and procedures of formal literary study with readings in representative critics.

460 (660) Early English Literature (3) A survey of Old and Middle English literature in translation (excluding Chaucer) from the beginnings to 1485.

465 (665) Victorian Prose and Poetry (3) A study of English literature from 1832 to 1901.

470 (670) The British Novel to Joyce (3) Representative novels to Joyce, with attention to the historical development of the genre in Great Britain.

475 (675) Modern Novel (3) Major twentieth-century novelists and movements, primarily in Great Britain and America.

480 (680) Chaucer (3) A study of representative works read in Middle English, with attention to the cultural context.

485 (685) Shakespeare (3) A study of representative poems and plays, with attention to the cultural background and to the theatre of Shakespeare’s age.
490 (690) Seventeenth Century British Literature (3) A study of the British literature written between 1603 and 1660 including Milton’s entire career.

494 Internship in English (3) 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.

495 (695) 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.

496 (696) Seminar [title TBA] in Language or Literature (3) Special topics in literature or linguistics. May be repeated with variation in topic.

499 Critical Approaches to Literature: A Senior Capstone Course (3) 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.

700-701 Graduate Studies in Language or Literature (3, 3) Advanced study in literature or linguistics. Open to graduate students in Education. May be repeated for credit.

**Family and Consumer Sciences (FCS):**

100 Family and Consumer Sciences Perspectives (2) 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 organization 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 (3) Intensive four-week 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 (1-6, 1-6) Prereq: Senior standing and minimum of 2.50 cumulative grade point average.

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 credit hours. Prereq: Departmental and instructor’s approval.
48-, 49- Supervised Field Experience (1-6, 1-6) 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 six hours in 48- and six hours in 49- depending on available resources and student's course load at time of registration. Scheduling arrangements must be made through the advisor and the department chair at least one semester prior to registration. The third digit will follow the pattern described above. 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.

701-702 Master’s Thesis (3, 3) Thesis proposal and research; thesis writing and presentation. 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.
Evaluation in Family & Consumer Sciences Education (3) Purposes, fundamental principles, and techniques.

Finance (FIN):

260 Financial Planning (3) An introductory course designed to enable the student to consider the factors that must be included in developing an individual financial plan. Emphasis is placed on developing goals and objectives, insurance, investments, taxes, real estate, inflation, retirement planning, and estate planning. Prereq: Sophomore standing.


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) Basic investment concepts, investment theory, fundamental analysis, investment timing stocks, mutual funds, bonds, options, commodities, and real estate. Prereq: FIN 301 or instructor’s approval.

313 Analysis of Financial Statements (3) An indepth study of current financial reporting practices; analysis and interpretation of corporate financial statements, utilizing text, spreadsheets, and selected cases. Accounting majors may not take this course for credit. 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: FIN 301.

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, internationalization, 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.

415 Options and Futures (3) Evolution, operation, and uses of futures and operations markets; analysis of commodity, financial, foreign exchange, and stock index futures and options. Prereq: FIN 311.
461 Seminar in Banking (3) This course serves as the capstone course in banking and provides students with an in-depth look at the current problems encountered by commercial bank managers. International issues, new products and delivery systems, and social concerns as related to commercial banking are also examined. Prereq: FIN 351 or permission of instructor.

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 (3-9) Supervised work experience in business establishments, institutions, or other organizations matched to the student's curriculum. Prereq: Senior standing or the chair's approval.

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) An analysis of the problems associated with the internal financial management of business enterprises through the application of decision-making methods.

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. Prereq: FIN 710.

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.

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.

**Fine Arts (FA):**

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.

**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. Prereq: FSCI 200 or instructor's approval.

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 (FSMG):**

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

312 Quantity Food Management (4) Principles of food materials handling and menu planning for volume feeding. Laboratory experience in quantity food procurement, preparation, service, personnel management, and sanitation. One one-hour lecture and two three-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 (613) 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 DI in dietetics.

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

**French (FREN):**

101-102 Elementary Conversation (2, 2) Introductory course with emphasis on oral communication. Elective credit only. Does not satisfy foreign language requirement.

111 Elementary French (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 this language. After passing 111, students will take the second semester of the elementary sequence, 122. Three one-hour lectures and two hours of lab.

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 completion of this course, students will take either FREN 122 or 222, depending on their overall performance in FREN 115 and their score on the final exam. Three one-hour lectures and two hours of lab.

122 Elementary French (4) An introductory course emphasizing listening, speaking, reading, and writing. Three one-hour lectures and two hours of lab. 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 hours of lab. 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.
321 (521) 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.

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 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. Prereq: FREN 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 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.

350 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: 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: FREN 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 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.

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: FREN 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 francophone world. In addition to business, professions such as communications, travel and tourism, agriculture, and criminology will be covered. Composition of business letters and resumes, translation, and presentation of oral reports. Research paper required for graduate credit. Prereq: FREN 341 or 342 or instructor’s approval.

491 (691) French Cinema (3) A survey of French cinema from the turn of the century to the New Wave of the 1960s and Ô70s. Discussion of the films of major French directors with emphasis on how each film contributes
to the development of a national tradition 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.

701 Special Topics for Non-Native Foreign Language Professionals (2-4) Intensive oral and written drill combined with specialized research projects. Concentrated study on areas of professional need and interest. Prereq: An undergraduate degree with a foreign language minor, or instructor's approval.

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. Graded on a pass/fail basis.

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.
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 resume 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.

**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.

205 Introduction to Meteorology (3) An introduction to the elements and processes that shape the weather. Weather observation techniques, weather analysis, and forecasting will be examined. A survey of global climates and atmospheric pollution will also be presented.

280 Introduction to 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 and processing, basic analytic procedures, and cartographic output are emphasized. Prereq: Sophomore standing or permission of instructor.

351 Domestic Tourism (3) An introduction to the domestic travel and tourism industry in the United States. The issues and needs confronting domestic tourism from the perspective of the private sector will be examined. Socio-economic and environmental relationships will be discussed in relationship to the consuming public and government.

352 International Tourism (3) An examination of International Tourism in today's world. The course will examine the role of tourism and the social, economic and environmental impacts of development in host
nations. International tourist sites, flow patterns and other evaluative measures to facilitate tourism will be examined.

360 (560) Geographic Information Systems: Development and Applications (3) A systematic study of the development of a Geographic information System (GIS), including data acquisition, database management, manipulation of geographic information, and analysis of spatially-related data. Emphasis will include practical experience in employing the principles and concepts of a GIS in studies of geography, geology, tourism, business, agriculture, and environmental assessment. Prereq: Junior standing; GEOG 280 or permission of instructor.

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.

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.

393 Geography of Tennessee (3) An introduction to the physical and cultural patterns in Tennessee with emphasis upon an understanding of the distribution of population, resources, and forms of economic activity. With attention given to relevant current State problems. Prereq: Junior standing.

441-442 (641-642) Travel-Study (2, 2) A faculty-supervised domestic and/or international educational group tour. A maximum of two credit hours can be counted towards a major.

444 Geography/Travel-Tourism Internship (3-9) Provision for an advanced student to benefit by supplementary practical experiences in a particular branch of Geography or Travel-Tourism. 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: Geoscience major in Geography or Travel-Tourism concentration and Junior standing.

451 Concepts and Regulations of Tourism (3) This course introduces the methods and data sources for the analysis of Tourism and Travel. Geographic theories related to diffusion and model development will be examined. The effects of inter- and intranational regulations on flow patterns will be studied. Prereq: Junior standing.

452 Geography of Travel and Tourism (3) The study of global environments and transportation systems to analyze tourism and travel trends. An examination of resort areas, frequency patterns to various resorts, cultural and economic opportunities and perception of places are included in the course. Prereq: 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):**

111 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 of lecture and two hours of laboratory. GEOL 111 is a prerequisite to GEOL 113.

113 History of the Earth (4) An examination of Earth History and global change using a ÔsystemsÕ approach. The evolution and interactions of the lithosphere, hydrosphere, atmosphere, and biosphere over geologic time will be studied. Three hours of lecture and two hours of lab. Prereq: GEOL 111.

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 of lecture and two hours of lab.

180 Topics in Geology [Title] (1-4) Study of special topics, laboratory or field experiences at an introductory level not requiring extensive prerequisites in the discipline. Topics include, but are not restricted to: Gemology, Geology of Selected Natural Parks, Geohazards, Dinosaurs and Science, Evolution-Creation Controversy. This course may be repeated for credit with different topics.

200 Career Exploration and Development in Geology (1) Seminar format discussions and activities focusing on exploring career options in geology and developing a professional portfolio. Topics include: potential fields of study and employment, vita and professional portfolio development, analysis of journal articles, discussion of research methodologies, instruction in the use of library resources including electronic databases, scientific writing and oral communication skills. Prereq: GEOL 113.

310 Introduction to Oceanography (3) An introduction to 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. Prereq: one year sequence in a science.
318 (518) Mineralogy (4) A study of the crystallography, classification, identification and the systematics of mineral families. Laboratory includes hand specimen and analytical methods of identification. Three hours of lecture and two hours of lab. Prereq: GEOL 111, CHEM 121 and MATH 140 or equivalent.

331 (531) Igneous and Metamorphic Petrology (4) A study of the genesis, classification, and identification and tectonic setting of igneous and metamorphic rocks. Laboratory includes hand specimen and optical methods of identification. Three hours of lecture and two hours of lab. Prereq: GEOL 318 or instructor’s approval.

335 (535) Geologic Evolution of North America (3) A region by region and through geologic time study of North America using National Parks and Monuments as case study examples. Topics include physiography and geomorphology, geologic processes and materials, natural resources, structural, tectonic and erosional history. Prereq: GEOL 113.

337 (537) 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 of lecture and two hours of lab. Prereq: GEOL 111, GEOL 113; recommended MATH 251-252 or equivalent.

341 (541) Environmental Geology (3) The application of geology to the interaction between man and the environment. Topics include geohazards, chemical and nuclear contamination of soils and water, remediation of environmental problems and governmental environmental agencies and laws. Prereq: GEOL 111.

351 (551) Principles of Paleontology (4) A survey of ancient vertebrates, invertebrates, plants, and the 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. Laboratory exercises will stress identification and morphology of invertebrate taxa that play a significant role in the fossil record. Three hours of lecture and two hours of lab. Prereq: GEOL 111 and GEOL 113 or instructor’s approval.

371 (571) Geodynamics (3) The application of geophysical concepts to the understanding of Earth’s interior and plate tectonics. Topics include: architecture and composition of Earth’s interior; seismology; gravity anomalies, geomagnetics, geomagnetic reversals, geomagnetic dating, polar wandering and geodynamo theory; radioactivity and heat flow studies; geotomography plate tectonic processes and patterns through time. Prereq: GEOL 111 and GEOL 113. Recommended: PHYS 211 and 212 or 220, 221 and 222.

411 (611) 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. Prereq: GEOL 111 and GEOL 113. Recommended: GEOL 318.

412 (612) Principles of Stratigraphy (2) Methods of correlating rock strata according to North American Stratigraphic Code including lithostratigraphy, chronostratigraphy, and biostratigraphy. Two hours of lecture per week. Prereq: GEOL 411.

440 Geohydrology (3) A study of the water cycle, especially those parts dealing with streams, ground water, and water quality. Two hours of lecture and two hours of lab. Prereq: MATH 140, GEOL 111, CHEM 121.

451 (651) 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. Prereq: GEOL 111 and either GEOL 113 or instructor’s approval.
462 Methods in Field Geology (4) 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; use of the library in acquiring geologic information; 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 approval of the geology faculty.

481 (681) Special Topics in Geology: (Title) (1-4) Intensive lectures and/or laboratory work on special topics in geology. Topics include, but are not limited to: Clastic Petrology, Carbonate Petrology, Geochemistry, Paleocology, Biostratigraphy and Paleobiogeography, Geology of Tennessee, Geology of Belize, Economic Geology, Geoscience Education, Comparative Planetology, History of Geology. 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.

490 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. Grading on a pass or fail basis.

**German (GERM):**

101-102 Elementary Conversation (2, 2) Introductory course with emphasis on oral communication. Elective credit only. Does not satisfy language requirement.

111 Elementary German (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 hours of lab.

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

222 Intermediate German (4) Grammar review, reading, writing and conversation. Three one-hour lectures and two hours of lab. Prereq: GERM 122 or the 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 11, 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. 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 resumes, 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 Applications (3) Computer-based design, tools, and practices through actual use in the design laboratory. 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.

325 Advertising Design (3) An introduction to print-based advertising design. Advertising strategy and production using industry standard computer software applications. Strong emphasis placed upon conceptual development and print based graphic design aesthetics. Prereq: ART 221-222 and ART 305 or permission of instructor.

335 Electronic Imaging (3) An introduction to the use of the camera within the context of digital image manipulation. Development of a heightened level of visual literacy. Production of aesthetic digital imagery that is highly conceptual and personal. Prereq: ART 221-222, GDES 322.

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 (2) 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.

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: ART 221-222, ART 305, and FA 410 or GDES 325 and permission of instructor.

440 Professional Practices in Design (1) Structured, weekly seminar for discussion and preparation of design students for material and professional expectations in their field. A variety of topics such as portfolio presentation, career strategies, and professional development through graduate studies will be covered.

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: senior standing and all 300-level courses in the Graphic Design Area of Emphasis 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 koine 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.

303 Pharmacology and Sports (2) Pharmacology and sports examines classifications, therapeutic uses, actions, and side effect/adverse reactions of major drugs related to sports activities. The focus is on athletes and their knowledge of pharmaceutical products. 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.

320 Advanced First Aid and CPR (3) Procedures for emergency care and accident prevention. ARC certification in Advanced First Aid and CPR available.

35- Topics: [Selected Areas] (2, 3) Topics in contemporary health issues. The subject matter is indicated by the third digit: 1 for substance abuse (3 hrs), 2 for environmental concerns (2 hrs), 3 for human sexuality (3 hrs), and 4 for aging populations (2 hrs). May enroll in one or more selected areas.

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. Major emphasis will be placed on Comprehensive School Health programs and methods and materials to carry out school health instruction. Includes field experience in lifetime wellness, grades 9-12. Prereq: HLTH 111.

440 Health Fitness: Assessment and Guidelines (3) The purpose of this course is to prepare Health and Human Performance majors with the foundational knowledge and skills to adequately assess clients (risk determination/risk stratification) prior to beginning an exercise program. Information in this course will serve as a foundation for the student prior to taking Exercise Testing and Prescription. Current organizational position papers will be addressed such as the Surgeon General’s report of Physical Activity and Health, NIH Consensus regarding health risks of obesity, Nutrition for Physical Fitness position paper of the American Dietetics Association, ACSM position stand on proper and improper weight loss programs, NCEP II guidelines for lipid management and recent physical activity recommendations from the Centers for Disease Control and Prevention. Prereq: HLTH 111 and HLTH 320.

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.

**History (HIST):**

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

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

121H-122H Development of World Civilization (3, 3) Open to students who have demonstrated superior academic ability. Consent of department required. (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.

201 History of the United States I (3) A study of the main currents and developments in American life from colonial times to 1877.

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

301 History and Historians (2) An introduction to key historical concepts and skills, including the nature and fields of history; the techniques of historical research and writing; and the philosophies of history. Should be taken as soon as possible after the major is declared. May not be taken after HIST 499. 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.

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 MILS 310)
331 History of Tennessee (3) 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 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, 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, 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).

422 (622) 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.

431 (631) From Infant to World Power: American Diplomacy, 1776-1900 (3) The American Revolution, the Louisiana Purchase, the War of 1812, the Monroe Doctrine, expansionism during the 1840’s and 1850’s, the Far East, Civil War diplomacy, the purchase of Alaska, Pan Americanism, the new manifest destiny, war with Spain, and various other topics.

432 (632) World Power and Leadership Responsibilities: American Diplomacy, 1900 to the Present (3) America’s response to its position as a world power. Latin America and the Caribbean (Panama Canal Zone, etc.), Far Eastern interests, World War I, the interwar period (Manchurian Crisis, the Good Neighbor Policy, etc.), the causes of World War II, World War II diplomacy, and the Cold War years (the Korean War, Cuba, Vietnam, etc.).

434 (634) 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.

435 (635) 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.

447 (647) 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.

448 (648) 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.

450 (650) 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.

461 (661) 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.

462 (662) 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.

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 indepth study. May be repeated for credit (with different topic). Only six hours of undergraduate topics courses (480 or 490) can be counted toward the major or minor. Not regularly offered.

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 (3) 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.

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 in one or more of the following areas: (a) interdisciplinary approaches to historical periods, (b) specialized topics suitable for indepth study, and (c) comparative history. May be repeated for credit (with different topic). Only six hours of undergraduate topics courses (480 or 490) can be counted toward the major or minor. Not regularly offered.

491 (691) The Old South (3) A study of the political, social, and economic development of the southern states from settlement by Europeans to the end of the Civil War. Emphasis upon the rise of the Cotton Kingdom and the causes of Secession.

492 (692) The South Since 1865 (3) A study of the South both as a distinct region and as an area reestablishing itself in American life after the Civil War. The unique problems adjusting to defeat, the revolution in the labor system, and race relations, as well as the Populist challenge, industrialization, the plight of tenant farmers, the decline of cotton, and the integration struggle.

494 (694) The Jacksonian Era, 1815-1850 (3) A critical inquiry into the period from James Madison through James K. Polk. Emphasis on the rise of nationalism politics, the acquisition of Florida, the Jacksonian
presidency, the acquisition of Texas and Oregon, the Mexican War, the slavery controversy, sectionalism, and other causes of the Civil War.

495 (695) The Civil War and Reconstruction, 1850-1877 (3) A critical inquiry into the inflammatory politics of the 1850’s, 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, WWI, an Age of Excess, depression and government response, and WWII.

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 WWII and the subsequent competition between the U.S. and the Soviet Union.

499 Senior Seminar (1) A capstone experience for History majors and Secondary History Education majors to review and integrate their academic coursework, strengthen their understanding of historical methodology, and relate their academic preparation to their post-graduation goals. Prereq: HIST 301.

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. Significant reading and writing required. Topics, prerequisites, and course requirements announced in advance.

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 usually enroll in this course during the Fall and Spring Semesters as they complete the program requirements and receive the one hour credit at the end of the Spring Semester, with an S grade for the Fall Semester. Under some circumstances, the course might be completed in one semester with the instructor’s approval. This course is graded on a P (Pass) or F (Failure) 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 by attending public addresses of distinguished visitors throughout the academic year. Submission of a course paper is also required. Students usually enroll in this course during the Fall and Spring Semesters as they complete the program requirements and receive the one hour credit at the end of the Spring Semester, with an S grade for the Fall Semester. Under some circumstances, the course might be completed in one semester with the instructor’s approval. This course is graded on a P (Pass) or F (Failure) 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 usually enroll in this course during the Fall and Spring Semesters as they complete the program requirements and receive the one hour credit at the end of the Spring Semester, with an S grade for the Fall Semester. Under some circumstances, the course might be completed in one semester with the instructor’s approval. This course is graded on a P (Pass) or F (Failure) 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 usually enroll in this course during the Fall and Spring Semesters as they complete the program requirements and receive the one hour credit at the end of the Spring Semester, with an S grade for the Fall Semester. Under some circumstances, the course might be completed in one semester with the instructor’s approval. This course is graded on a P (Pass) or F (Failure) basis.

“S” (Satisfactory) Grade: For an explanation of this grade, see “Grades” section.

Human Learning (HLRN):

311 Computers and Learning (3) Familiarization with the microcomputer as pertains to the young learner. 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 young child.

325 Educational Psychology (3) Introduction to the psychology of learning, and of motivational and social development. Focus on the development of learning theory, the physiological and environmental factors that influence learning and the validity of various learning paradigms.

460 (660) Learning: Birth Through Age Eight Years (3) Exploration and knowledge of the learning process in context of parent-child, teacher-student, school-family-child relationships are the emphasis 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 laboratory experiences, directed observations, and limited participation in educational settings. Prereq: Admission to Teacher Education and TCED 302.
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.

Human Performance (HPER):

205 Sports Officiating (2) Training of students in the psychology of officiating, the mechanics, and court positioning to officiate interscholastic, recreational, and intramural sports.

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) Supervised study and experience with a cooperating agency. Application must be approved one semester in advance. Prereq: HPER 209.

304 Adapted Physical Education (3) Classification of atypical students who require modified programs in physical education. Activities and class reorganization suitable for required or special physical education classes.

305 Biomechanics of Human Movement (3) Analysis and application of basic biomechanical principles of human movement with an emphasis on safe instructional and performance practices. Also includes anatomical principles related to the structure and function of the musculoskeletal system. Prereq: any human anatomy and/or physiology with a lab or instructor’s approval.


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. Grades K-5. Portfolio checkpoint. Prereq: HPER 209, 308, 320, HLTH 111, Admission to Teacher Education.

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.
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.

316-317 Exercise Science Practicum (2, 2) Supervised study and experience with a cooperating agency. Application must be approved one semester in advance. Prereq: HPER 209.

320 Foundations, Sport Skills, and Rhythms (2) Addresses NASPE Guidelines and curriculum issues related to developmentally appropriate locomotor, rhythmic, and sport skills. Requires demonstration of performance proficiencies in selected team and individual sport skills. Prereq: Taken concurrently with HPER 209 preferred.

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.

405 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.

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: HPER 309; HLTH 351, 352, 353, 354; Admission to Teacher Education; taken concurrently with TCED 303 preferred.

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.

430 (630) Exercise Physiology (3) Application of the basic principles of science to the function, training improvement, and maintenance of the human body in various physically active situations unique to human performance. Prereq: Any human anatomy and/or physiology with lab.


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.

440 Evaluation in Human Performance (3) Overview of the procedures and instrumentation including appropriate use of technology as it applies to selection, implementation, and assessment of individuals and/or groups.

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.

491 Internship (12) One semester work experience with a cooperating agency. Application must be approved one semester in advance. Prereq: Must complete all core coursework per discipline.

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.

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.

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.

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.

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.

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.
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 equivalent.

213 Advanced Spreadsheet Applications (1) Hands-on experience in spreadsheet applications at the advanced level. Pass/Fail option. Prereq: INFS 212 or equivalent.

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 or equivalent.

223 Advanced Database Applications (1) Hands-on experience in database applications at the advanced level. Pass/Fail option. Prereq: INFS 222 or equivalent.

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 equivalent.

233 Advanced Word Processing (1) Hands-on experience in word processing at the advanced level. Pass/Fail option. Prereq: INFS 232 or equivalent.

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: Sophomore standing; INFS 211 and INFS 231 or their equivalent.

310 Management Information Systems (3) A comprehensive overview of the use of management information systems and their applications to all functional areas of business. It includes introduction to systems concepts, management support systems, technical foundations of information systems, contemporary approaches to building information systems, and managing information systems. Prereq: MGT 301.

331 Professional Word Processing (3) Advanced word processing application skills. Emphasis on criteria for selection of word processing hardware and software. Students are required to write reports and give oral presentations. Prereq: INFS 233.

351 Business Communications (3) Communication of business information by written letters and reports.

361 Network Administration (3) Introduction to concepts, terminology, and application of network administration. Topics include network architectures, security, services, and administration. The course will be taught in a networked computer-equipped classroom to provide experiential learning opportunities. The course also prepares the student for the CNA (Certified Netware Administrator) exam and portions of the CNE (Certified Netware Engineer) exam.

461 Automated Office Systems (3) Concepts, issues, and equipment involved in the electronic office. Students are required to write reports and give oral presentations. Prereq: MGT 301 or instructor's approval.
462 Office Management (3) Theory of planning, organizing, and directing in the office environment. Students are required to write reports and give oral presentations. Prereq MGT 301.

480 Internship in Information Systems (3) Supervised information systems work experience in business establishments, institutions, or other organizations. Students are required to write reports and give oral presentations. Prereq: Senior standing and approval of department chair.

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: INFS 310.

490 Independent Study in Information Systems (3) Special research projects undertaken individually under the supervision of the information systems faculty. Students are required to write research reports and give oral presentations. Prereq: Senior standing.

491 Current Issues in Information Systems (3) Seminar in current issues in the information systems environment. Students are required to write reports, develop information systems solutions for contemporary business issues and give technology-assisted oral presentations. Prereq: At least a grade of C in INFS 361.

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.

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.

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, laboratory and field work, is taught during the summer only. Prerequisites: Pre-college sciences and/or mathematics faculty members and consent of staff. For additional information about these courses and the frequency with which they are offered, contact the Chair of the Department of Biological Sciences.

**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.

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.

Japanese (JAPN):

101-102 Elementary Conversation (2, 2) Introductory course with emphasis on oral communication. Elective credit only. Does not satisfy language requirement.

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 hours of lab.

122 Elementary Japanese (4) An introductory course emphasizing listening, speaking, reading, and writing. Three one-hour lectures and two hours of lab. 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 hours of lab. Prereq: JAPN 122 or equivalent as determined by the department.


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 and study 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):

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, and ACCT 201.

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.

305 Creativity and Innovation (3) Intensive practice in the use of contemporary approaches to the creative process, including use of proven aids for developing innovative ideas. The generation of creative designs of
products, processes and services with emphasis on commercial applications is stressed. Considerable emphasis on intellectual contributions that can be patented or copyrighted. Prereq: Junior standing.


310 Production Management (3) An overview of the basic principles, functions and concepts involved in the design, operation, and control of operations in contemporary organizations. Topical coverage includes operations strategy, forecasting, capacity planning, location, production planning, materials management, productivity management, and quality management. Prereq: MATH 210, MGT 301, or Junior standing in Engineering. Same as INEG 310.

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


330 Quality Design and Control (3) The study of the application of quantitative approaches to the design and control of quality. Topics will include the 7 simple tools, measurement systems, statistical control systems, and design of experiments for multiple process specifications. Prereq: MATH 210 or junior standing in engineering. (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 301.

412 Applied Operations Management (3) Design, operation and control of production and operating systems. Emphasis is on the design, implementation and operation of integrated production and operating systems covering such functions as aggregate planning, master scheduling, inventory planning and control, material requirements planning, production scheduling and control, just-in-time production, capacity requirements planning, and product process layout designs. Prereq: MGT 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.

440 Staffing and Performance Appraisal (3) Analysis of the development of a qualified applicant pool and the selection of the applicants for positions or assignments. Additionally, analysis of establishing written standards of performance criteria and conformance to employment laws. Prereq: MGT 350 and BLAW 311.
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.

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 and BLAW 311.

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: Senior standing or approval of the department chair. May be repeated for up to 9 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 (3) 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. Prereq: Completion of all other business administration core requirements.

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: Senior standing and approval of instructor.

710 Organizational Theory and Design (3) This course will address the theory of how organizations are structured. The course explores the behavioral side or 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 problems and decision processes of operations management. Major aspects covered: operations design; resource allocation and activity planning and systems control.

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. MBA 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 MAc students. Prereq: Students must have a 3.00 graduate cumulative GPA with no ÒIÓ 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 and the reasons 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: either ECON 201 or 202 and 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 ACCT 201.

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 (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 the role of marketing research as an aid to decision making. Emphasis on problem identification, research design, communication methods, collection of data, analysis, interpretation,
and presentation of data applied to the solution of marketing problems. Students are required to prepare written research reports and make oral presentations. Prereq: MKTG 301. Coreq: MGT 320.

371 Forensic Marketing (3) 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 301.

373 Sports Marketing I (1) Addresses the application of the traditional “four Ps” of marketing (Product, Place, Promotion, Price) to sports marketing strategy development. Prereq: 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 (1) 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, FIN 301 and consent of instructor. Course may be repeated once for credit.

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.

430 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: MKTG 301 and CSCI 201 (or equivalent).

440 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.

450 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.

460 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.

465 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.

471-476 Current Topics in Marketing (3) Selected topics in marketing offered on an occasional basis. Prereq: MKTG 301.

480 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.

481-482 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.

710 Marketing Strategy (3) This course is a seminar in history of marketing thought and current perspectives with managerial application. Topics will include marketing theory and philosophy, marketing planning, market identification and environments, product strategy, price strategy, channels strategy, promotional strategy, and marketing assessment and control.

720 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.

Mathematics (MATH):

070 Developmental Algebra I (3) 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) Quadratic equations and inequalities. Graphing and straight lines. Systems of linear equations. Inverse, exponential, and logarithmic functions. Prereq: Appropriate mathematics placement OR completion of MATH 070. May not be counted toward any degree requirements, but may be substituted for one unit of high school Algebra II.

090 Developmental Geometry (3) 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) Functions (e.g., polynomial, exponential, and logarithmic). Zerors 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) 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.


191-192 Principles of Mathematics (3, 3) 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. Static 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) Descriptive measures, elementary probability, sampling, random variables. Discrete probability distributions, normal probability distributions, and introduction to inference theory. Prereq: MATH 140, 185, or 251.

241 Foundations of Mathematics (3) Proof techniques, sets, propositional calculus, functions, relations and properties of integers. Prereq: MATH 140, or 185, or 251. Credit may not be received for both MATH 241 and CSCI 301.

251-252 Calculus I, II (4, 4) 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.
291 Special Topics in Mathematics (1-3) Lectures and/or laboratory 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 241 or 251.


330 Differential Equations (3) Setting up and solving first order equations, applications of first order equations. Wronskians, use of operators and the exponential shift theorem, solutions of higher order equations with constant coefficients, systems of first order equations, solutions in series, Laplace transform methods. Prereq: 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)


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 210 and 251. Credit for both MATH 360 and MATH 365 (565) will not be allowed.

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 241.

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.


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 and either MATH 210 or ENGR 311.

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. Must be taken in sequence with MATH 462. Prereq: MATH 252 is a prerequisite for MATH 461.

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. Must be taken in sequence with MATH 461. Prereq: MATH 320 and MATH 461 are prerequisites for MATH 462.


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 241 and 320.

491-492 (691-692) Special Topics (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.

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) 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. Prereq: BIOL 110 and CHEM 121-122.
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 310 or instructor’s approval.

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.

402 (602) Immunology Laboratory (1) A laboratory 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 laboratory. 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 310.

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. 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 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 Advanced Course and the Leader’s Training Course. 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 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 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 3 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 3 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 3 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 3 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 are 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.

491 National Advanced Leadership Camp (6) 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.

111 Masterpieces of Music (3) A survey of world master-pieces of music from the Baroque period to the present.

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.

120 Fundamentals of Music (3) Basic music theory skills, including music notation, scales, key signatures, triads, intervals, and rhythms.

121-122 Music Theory I (3, 3) Sequential study of music fundamentals, harmonic progression, part-writing procedures, and stylistic elements. Must be taken in sequence. Prereq to 121: Passing grade on music theory entrance exam or a grade of C or better in MUS 120.

123-124 Aural Skills I (1, 1) Must be taken in sequence. Should be taken concurrently with MUS 121-122.

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.

221-222 Music Theory II (3, 3) Part writing and analysis in the standard harmonic vocabulary. Must be taken in sequence. Prereq: MUS 122.

223-224 Aural Skills II (1, 1) Continued development of sight-singing and aural skills needed by musicians. Must be taken in sequence. Prereq: MUS 122 and 124.

225 Composition (3) May be repeated for credit. Prereq: instructor's approval.

311 Group Music Activities (3) The use of music in recreational and other group situations.

317 Instrumental Ensemble Techniques (3) A survey of procedures and techniques important in the organization, management, and development of instrumental ensembles.

319 Vocal Ensemble Techniques (3) A survey of procedures and techniques important in the organization, management, and development of vocal ensembles.

320 Advanced Theory I (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.

321 Orchestration (3) Scoring for small instrumental combinations, full band and orchestra and vocal-instrumental combinations. Prereq: MUS 222 or permission of Department Chair.

323 Composition and Improvisation (1) Basic skills in composition and improvisation, with an emphasis on creating and doing. Special focus on 20th century practices and techniques.
324 Acoustics of Music (2) The study of the acoustical properties of musical instruments and the human voice, room acoustics, and other aspects of the physics of sound related to musical performance.

325 Electronic Music Composition (2) May be repeated for credit. Prereq: instructor's approval.

333-334 Piano Literature (2, 2) Standard piano repertoire from early keyboard works customarily played on the piano today to the present.

335-336 Vocal Literature (2, 2) 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 (2, 2) Repertoire for brass, woodwind, percussion, or guitar from the earliest music currently performed on these instruments to the most recent. Specific instruments designated by section.

339 Choral Literature and Styles (3) Examples of the choral art from the standard repertoire. Performance practices in various choral genre, periods, and styles.

340 Twentieth Century Music (3) Survey of styles and idioms of 20th century music. For the non-music major. Prereq: MUS 111.

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.

350 Basic Conducting (2) The development of foundational skills and practices for the conductor. Prereq: MUS 222.

361 Commercial Music Industry (2) A survey of the industry and career opportunities in the field of commercial music.

363-364 Piano Pedagogy (2, 2) Materials and methods for class piano and studio teaching.

365 Voice Science and Pedagogy (3) 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 (2, 2) Materials and methods for teaching brass, woodwind, percussion, or guitar. Specific instruments designated by section.
380 Recording Studio Techniques I (2) Multi-track recording and mixing techniques. Studio equipment and facilities.

381 Recording Studio Techniques II (1) Practical application with faculty supervision of recording techniques learned in MUS 380. May be repeated for credit. Prereq: MUS 380.

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.

410 Technology in Music (3) The use of computers, synthesizers, electronic keyboards, and other technology in making and recording music. Projects employing the capabilities of technology in music notation and composition as well as MIDI applications. Students are required to write reports and give oral presentations. For Music majors; other students by permission of instructor.

417 Marching Band Procedures (3) Developing instrumental marching units and designing show productions.

420 Advanced Theory II (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 320.

421 Counterpoint and Composition (2) Analysis and composition using imitation of various historical styles as well as original work. Experimentation with various sound sources, manipulating common musical elements in traditional and non-traditional ways. Prereq: MUS 222.

422 Form in Music (2) Units of structure, song forms, and single movement forms representing a variety of musical idioms, styles, and periods including repertoire from non-western cultural sources. Prereq: MUS 222.

423 Twentieth Century Techniques (2) Scale and modal resources. Melodic, harmonic, rhythmic, and metric practices in 20th century music. Prereq: MUS 222.

425 (625) Composition (3) May be repeated for credit. Prereq: MUS 222 or instructor's approval.

426 Choral Arranging (3) Scoring for the choral ensemble with emphasis on voice ranges and other elements relating to various kinds of choral organizations. Prereq: MUS 222.

430 Internship in Church Music (3) Supervised experience with a practicing church music director.

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.


452 Instrumental Conducting (2) Reading and interpretation of scores. Conducting and rehearsal techniques for large and small instrumental ensembles. Prereq: MUS 350.
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 (681-682) 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.

720 Band Arranging (3) Advanced techniques of arranging for wind and percussion instruments including arranging for marching band. Prereq: MUS 222 or equivalent.

721 Band Literature and Techniques (3) Representative repertoire for concert band with emphasis on program selection and performance preparation. Organizational structures, rehearsal techniques, program analysis and development approaches for the band.

731 Choral Literature and Techniques (3) Study of selected works from the choral repertoire. Advanced rehearsal techniques which develop the singing voice, diction, blend, precision, and other elements of ensemble. Efficient use of rehearsal time.

770 Advanced Conducting (3) Score study and interpretation, phrasing, articulation, and gesture control for the advanced conductor. Prereq: MUS 451 or 452 or equivalent.

791-793 Topics in Music (1-3) 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)

105-106, 205-206 Guitar Class
(1 credit per semester)
107-108, 207-208 Percussion 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. One credit sections require 1/2 hour of instruction and 5 hours individual practice per week; two credit sections require 1 hour of instruction and 10 hours of individual practice per week; three credit sections require 1 hour of instruction and 15 hours of individual practice per week; four credit sections require 1 hour of instruction and 20 hours of individual practice per week. Permission from the faculty is required for students to advance to the upper division level. A music major may not study more than six semesters in the lower division of the major applied 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.

111, 112, 114, 311, 312, 313, 314 Piano
(1-4 credits per semester)
121, 122, 124, 321, 322, 323, 324 Voice
(1-4 credits per semester)
131, 132, 134, 331, 332, 333, 334 Guitar
(1-4 credits per semester)
141, 142, 144, 341, 342, 343, 344 Flute
(1-4 credits per semester)
151, 152, 154, 351, 352, 353, 354 Double Reed
(1-4 credits per semester)
161, 162, 164, 361, 362, 363, 364 Clarinet
(1-4 credits per semester)
171, 172, 174, 371, 372, 373, 374 Saxophone
(1-4 credits per semester)
181, 182, 184, 381, 382, 383, 384 Trumpet
(1-4 credits per semester)
191, 192, 194, 391, 392, 393, 394 French Horn
(1-4 credits per semester)
211, 212, 214, 411, 412, 413, 414 Trombone
(1-4 credits per semester)
221, 222, 224, 421, 422, 423, 424 Baritone Horn
(1-4 credits per semester)
231, 232, 234, 431, 432, 433, 434 Tuba
(1-4 credits per semester)
244, 443, 444 Studio Guitar
(3-4 credits per semester)
251, 252, 254, 451, 452, 453, 454 Percussion
(1-4 credits per semester)
261, 262, 264, 461, 462, 463, 464 Harpsichord
(1-4 credits per semester)
271, 272, 274, 471, 472, 473, 474 Organ
(1-4 credits per semester)
740 Piano
(1-4 credits per semester)
742 Voice
(1-4 credits per semester)
743 Guitar
(1-4 credits per semester)
744 Wind Instruments
(1-4 credits per semester)
745 Percussion
(1-4 credits per semester)
746 Harpsichord
(1-4 credits per semester)
749 Secondary Applied Music (1)
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. See Special Requirements for Music Majors section.

395 Junior Recital (1-2) Preparation of a solo public performance. Final approval for presentation will be given by the faculty. Student must be enrolled in upper division private instruction during the term in which the performance is given.

495 Senior Recital (2) Preparation of a solo public performance. Final approval for presentation will be given by the faculty. Student must be enrolled in upper division private instruction during the term in which the performance is given.

Music Education (MUED):

211 Introduction to Teaching Music (1) A comprehensive view of music teaching as a profession including requirements, challenges, and opportunities. Includes 10 clock hours of clinical laboratory experiences, directed observations, and limited participation in classroom settings.

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.

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.

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.


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 7.5 weeks. Must be taken concurrently with MUED 473. (Normally taken
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 7.5 weeks. Must be taken concurrently with MUED 473. (Normally taken concurrently also with MUED 471.) Prereq: Admission to Teacher Education, TCED 301-302 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.

710 Problems in Elementary Music Education (3) Methods and materials appropriate for the non-specialist in teaching music on the elementary level. Special emphasis on appropriate variation for diverse class types.

760 Administration and Supervision in Music (3) Preparation and management of budget; organization and development of the music program; selection and supervision of professional staff; public relations in music administration.

791-793 Topics in Music Education (1-3) 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.

150, 350 Band Camp (1, 1)
151, 351 Marching Band (2, 2) Prereq: MUEN 350.
152, 352 Symphonic Band (2, 2)
153, 353 Concert Jazz Band (2, 2)
154, 354 Brass Ensemble (1, 1)
155, 355 Woodwind Ensemble (1, 1)
156, 356 Percussion Ensemble (1, 1)
157, 357 Collegium Musicum (1, 1)
158, 358 Concert Band (1, 1)
160, 360 Piano Ensemble (1, 1)
161, 361 Accompanying (1, 1)
162, 362 University Singers (2, 2)
163, 363 Choral Society (1, 1)
164, 364 Collegiates (1, 1)
165, 365 New Pacer Singers (2, 2)
166, 366 Treble Choir (1, 1)
167, 367 Lyric Opera Theatre (2, 2)
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.

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 International Travel Studies in Agriculture and Natural Resources (1-3) International travel course to study topics in Agriculture and Natural Resources. Requires travel to another country, oral and written reports. May be repeated one time for credit. (Same as AGRI 230) Pass/Fail grading basis. Prereq: Instructor’s approval.

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. Prerequisites: 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 minimum GPA of 2.75.
410 (610) Farm 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.

420 Supervised Field Experience (6, 8) Minimum of one semester (or two semesters for eight 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.

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.

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 252, 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.

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, and 221. Coreq: NURS 202 and 241. ZOOL 252 must be repeated with NURS 231 if a grade of C or above not earned previously.

241 Health Assessment (4) Emphasizes concepts and skills of health assessment. Prepares the nurse to assess and analyze the physical and psychosocial status of individuals. Three hours lecture and two hours lab. Prereq: NURS 212 and ZOOL 251 or instructor’s approval. Coreq: NURS 231 and ZOOL 252 if grade of C or above not previously earned.
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.

301 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. One hour lecture and two hours lab. Prereq: NURS 231 or instructor’s approval.

302 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. One hour lecture and two hours lab. Prereq: NURS 301 or instructor’s approval.

311 Health Assessment (5) Emphasizes concepts and skills of health assessment. Prepares the nurse to assess and analyze the physical and psychosocial status of individuals. Three hours lecture and four hours lab. Prereq: NURS 231 and instructor’s approval.

321 Acute and Chronic Health Care Nursing I (8) 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 ten hours lab. Prereq: NURS 231. Coreq: NURS 301 and 311. Students cannot receive credit for both NURS 321 and NURS 350.

331 Acute and Chronic Health Care Nursing II (6) 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 six hours lab. Prereq: NURS 321. Coreq: NURS 302.

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 321. Coreq: NURS 302.

350 Transition to Professional Nursing (7) Transition course for Registered Nurses. Expands on nursing content introduced at the technical level to provide the RN with the broader knowledge base required in baccalaureate nursing education. Taken in place of NURS 321. Four hours lecture and six hours lab. Prereq: Licensure as a Registered Nurse and admission to the clinical nursing program. Students cannot receive credit for both NURS 350 and NURS 321.

362 Trends and Issues in Nursing (2) 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 lecture. 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.

400 Family Health Nursing (8) Examines normal developmental and reproductive tasks and related health needs and issues of client/client systems. Five hours lecture and six hours lab. Prereq: NURS 302, 331, and 341.

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 Level II courses. 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 Level II courses and CFS 211 or PSYC 313. 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. Two hours lecture and eight hours lab. Prereq: NURS 400 or NURS 350 and successful completion of the NLN Mobility Profile II exams.

421 Trends and Issues in Nursing (2) Examines the nurse's role in change through evaluation of current trends and issues impacting upon the nursing profession and health care delivery. Writing and speaking intensive course. Two hours lecture. Prereq: Completion of junior level nursing curriculum 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 302, 331, and 341 or NURS 302, 350, and successful completion of the NLN Mobility Profile II exams. Coreq: NURS 400.

441 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 seminar and eight hours lab. Prereq: NURS 400 and 431. Coreq: NURS 411.

442 Leadership and Management in Nursing (6) 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 eight hours lab. Prereq: NURS 401, 406, and 431. Coreq: NURS 411.

451 Research in Nursing (3) Introduces methodology of investigation, including evaluation of existing and ongoing research studies in nursing and health care. Writing and speaking intensive course. Three hours lecture. Prereq: MATH 210 and completion of Level II nursing curriculum or instructor’s approval.

480-489 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.

**Nutrition (NUTR):**

100 Introductory Nutrition (3) Fundamentals of human nutrition and wellness. The impact of global interdependence on food availability.

322 Principles of Nutrition (3) Recommended dietary allowances. Function, food sources, absorption, and utilization of nutrients. Energy metabolism. Prereq: NUTR 100 and eight hours of physical or biological sciences.

422 (622) Lifespan Nutrition (3) Nutritional needs of selected developmental stages such as reproduction, growth, and aging. Prereq: Eight hours of physical or biological science.

433 (633) Nutrition in Disease (4) Principles of nutrition applied in the management of disease syndromes which may be influenced by diet. Three one-hour lectures and one two-hour lab. Prereq: NUTR 322 and CHEM 310, CHEM 319L or instructor’s approval.
443 (643) Community Nutrition (3) Nutrition problems and services in the community. Government and industry sponsored programs. Observations and field experiences included.

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.

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 310, 319L 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 DI in dietetics 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 DI in dietetics.

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 DI in dietetics, 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 DI in dietetics, 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 Computer Applications in PRA (3) Application of the microcomputer to several course subject areas taught in PRA to include design, park management, recreation programming, financing, managing, and marketing. Prereq: CSCI 200 or 201.

310 Recreation Area Design and Comprehensive Planning (4) 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. Spatial attention will be given to the study of recreation needs analysis for comprehensive recreation plans. Two one-hour Lectures and two two-hour labs.

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 (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.

Philosophy (PHIL):

110-120 The Adventure of Ideas (3, 3) 110: 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: 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.

140 Introduction to Business Ethics (3) Survey of landmark cases in business ethics within the context of traditional moral theories. Issues include deceptive advertising, insider trading, whistle blowing, environmental responsibility, employee’s rights, affirmative action, and corporate codes of ethics.

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/manipulation. 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, decideability and completeness. Prereq: PHIL 210 or equivalent, or instructor’s approval.

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.

420 (620) Philosophies of Creativity and the Future (3) Studies in the contemporary philosophies of process thought, Marxism, Biblical philosophy, evolutionary naturalism, theistic evolution, and philosophies of hope. Emphasis on their concepts of reality (person, time, history, nature, society, history, God), knowledge, and values. Position paper required.

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, 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.

480 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 RLST 480)

485 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 (6) hours.

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 (6) 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 on the beginning non-swimmer levels. A proficiency test administered the first day of class. One hour 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. Prereq: Current certification in First Aid and CPR, or concurrent enrollment in HLTH 320. May not 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. Prereq: Current certification in advanced lifesaving and/or emergency water safety. 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 Karate I (2) Beginning karate. 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 Karate II (2) Intermediate and advanced karate 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 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 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 and two one-hour labs.

125 Weight Training (2) Various weight training programs. Emphasis on the safe use of the Universal weight machine, understanding the principles of training, and the development of individual fitness goals. May be repeated for credit. One hour and two one-hour labs.

126 Archery (2) Development and refinement of the skills of archery. Emphasis on aiming techniques, safety, rules, equipment, and tournament competition. One hour 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 competitively and recreationally. One hour and two one-hour labs. May be repeated for credit.

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 local golf courses. One hour and two one-hour labs. May be repeated for credit.

136 Advanced Golf (2) To provide the student with an overview and understanding of golf rules, skills, and etiquette with opportunities to develop greater skill through instruction and practice at local golf courses. Prereq: PACT 135 or instructor’s approval. 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.

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.

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.

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 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 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 and two one-hour labs. Prereq: PACT 160 or instructor’s approval. May be repeated for credit.

165 Backpacking/Canoeing (2) This course addresses the fundamentals of backpacking and canoeing, including safety and proper use of equipment. 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 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 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 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):**

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 for students with no previous background in physics and not requiring a higher level of physics in their curriculum. The course stresses fundamental physics concepts with demonstration experiments and activities. The course is taught with an integrated laboratory and lecture.

211-212 College Physics (4, 4) 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 laboratory. Prereq: MATH 140 or equivalent.

220 University Physics (4) 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 laboratory. Prereq: MATH 251.

221 University Physics (4) 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 laboratory. 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 PHYS 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 PHYS 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: PHYS 343.

**Plant Science (PLSC):**


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 content. 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.
305 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. Prereq: Two semesters of biological science.

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.

333 (533) Weed Science (3) Economic importance of weeds. Weed identification, weed interference, and integrated management. Herbicide selectivity, persistence and mode of action. Government regulation of herbicides. Specific recommendations for crop and non-crop usage. Two one-hour Lectures and one two-hour lab. Prereq: Two semesters biological science, CHEM 310, SOIL 210. A term paper and research project will be required of students receiving graduate credit.

334 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.

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. Prereq: BIOL 120.

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, minimum GPA of 2.75.

422 (642) Forage Crops (3) Characteristics, distribution, and economic importance of forages. Culture, management, and utilization of grasses and legumes in forage-livestock systems. Students are required to write reports and give oral presentations. Two one-hour lectures and one two-hour lab. Prereq: SOIL 210.


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.

**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 Comparative European Government and Politics (3) Analyses of government and politics in the major countries of Europe and an introduction to some theoretical topics in comparative politics.

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 Financing Public Policy (3) A study of the various approaches used in formulating budgets for local, state, and national governments. Emphasis will be on viewing the budget as reflecting goals of public policy. Course will include a review of some of the unique differences between the governmental budgetary process and that 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 Division 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 departmental chairperson.

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 advisor 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
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 hours of lab.

122 Elementary Portuguese (4) An introductory course emphasizing listening, speaking, reading, and writing. Three one-hour lectures and two hours of lab. 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 hours of lab. Prereq: PORT 122 or equivalent as determined by the department.

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.

290 General Experimental Psychology (4) An overview of experimental methodology and research in the behavioral sciences. Essay examinations are given. Students write a comprehensive research paper and several laboratory reports in the publication format of the American Psychological Association. Speaking assignments are required. Three one-hour lectures and one one-hour lab. Prereq: PSYC 110-120.

295 Statistical Methods (3) An introduction to descriptive and inferential statistics with emphasis on central tendency, variability, student’s t, probability, correlation and regression, analysis of variance and nonparametric tests. Prereq: Three hours lower division psychology and MATH 140.

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.

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 laboratory 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 290 and 295.

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 290 and 295.

340 Industrial and Personnel 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.

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.
430 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 PHIL 430)

440 Directed Reading in Psychology (3) In-depth investigation of selected topics under supervision of staff members. By arrangement. Prereq: Junior or senior standing, minimum average of 3.00, instructor’s approval.

445 Undergraduate Research Participation (3) Experience in active research projects involving supervision of staff members. By arrangement. Prereq: Junior or senior standing, minimum average 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 and PSYC 350 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 290 and 295.

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. For psychology majors only. Prereq: Eighteen hours upper-division psychology or instructor’s approval.

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 (6) hours.

701 Directed Studies in Psychology (3) Directed study into the different subject matter areas of psychology.

Reading (READ):

080 Developmental Reading (2) A course designed to prepare freshmen for college reading demands. Emphasis upon comprehension growth and vocabulary development. Small group instruction and laboratory component. Credit is not counted toward degree requirements.

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 us 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)


480 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 480)
Secondary Education (SEDU):

411 The Teaching of Science in the Secondary Schools (3) Trends in teaching secondary school science grades 7-12; emphasis on experimental programs and research. Curriculum, instructional strategies, laboratory and field experience, materials, audio-visual techniques, computer assisted instruction, evaluation processes, professional associations, and safety in science teaching. Directed experiences in public schools. Prereq: TCED 301 and 302 and admission to Teacher Education.

412 The Teaching of Mathematics in the Secondary Schools (3) Development of strategies, techniques, materials, planning skills and evaluation skills appropriate to the high school mathematics students. Moreover, the student will apply the above skills and strategies in a micro teaching situation. Prereq: TCED 301 and 302 and admission to Teacher Education.

413 Instructional Strategies: Modern Foreign Language (3) Purposes, techniques, materials, and evaluation in teaching Modern Foreign Language. Prereq: TCED 301 and 302 and admission to Teacher Education.

414 Instructional Strategies: English (3) Purposes, techniques, materials, and evaluation in teaching English. Prereq: Admission to Teacher Education and TCED 302.

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 3 semester hours for a maximum of 9 semester hours. Prereq: Permission of instructor. Certain sections may be offered on a pass/fail basis.

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.

791-792 Master Research Project, 9-12 (2, 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 9-12 setting). Prereq: for 791-EDEV 710 and EDFN 710; for 792--SEDU 791. May repeat enrollment. P/N only.

793 Student Teaching Grades 7-8 (5) 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 (5) 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 (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.

240 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. Research, writing and oral presentations are required. Prereq: SWRK 200, 220; approval for initial progression; ENGL 111 and 112.

260 Human Behavior and Social Environment (3) Introduces a broad range of theories relating to human biopsychosocial development. 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 as determinants of behavior. Prereq: SWRK 200, 220; approval for initial progression; BIOL 110, ZOOL 201 or 251 or 252; one PSYC (110 or 120); and one SOC (201 or 202 or 208).

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.

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.
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. Skills and processes of engagement, data collection, assessment, intervention, evaluation, and termination phases in service delivery with a variety of systems are included. Primary emphasis on micro-systems and focus 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 260 and COMM 230.

345 Social Work in Juvenile Justice: Legal Issues/Social Problems (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 professional and the client. Prereq: Instructor’s approval. (Same as CJ 370)

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 SWRK340. 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.

425 Special Topics (1-3) Selected topics of current interest and importance. Prereq: Instructor's approval.

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 400 and approval for advanced progression.

450 Social Work Field Instruction (12) Provides block placement for direct practice experience in a selected social work setting. Students’ activities 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 provided by periodic visits during the semester by faculty. Additional learning and preparation through regularly scheduled seminars. Prereq: SWRK 440, completion of all required liberal arts courses, 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, with particular emphasis on crime, suicide, mental illness, family disorganization, and the vices.

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.
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.

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 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 (512) 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. Prereq: Three hours general psychology or general sociology. (Same as PSYC 312)

315 (515) Work, Leadership, & Organizations (3) Structure of groups, organizational leadership, patterns of communication, division of labor, and power as they appear in a variety or work and organizational settings. Prereq: SOC 201.

341 (541) Gender and 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)

364 (564) Corrections (3) A survey of correctional methods including probation, parole, other community based corrections, and correctional institutions. (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)

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 ANTH 400)

402 (602) Sociological Theory (3) A survey and analysis of the development of sociological theory. Strengths and weaknesses of theoretical orientations. Students are required to write papers, make oral presentations, and take essay examinations in this course. Prereq: SOC 201.

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, ANTH 101, or permission of instructor. (Same as ANTH 404)

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

431 (631) Urban Society (3) A study of the origin, growth, and causes of growth of modern cities. Topics include population, ecology, and effects of urbanization on social institutions and relationships. Prereq: SOC 201.


434 (634) Community, Society, and Change (3) Impact of change on community and society. Contrast between urban and rural lifestyle. Problems and promises of modernization. Prereq: SOC 201. (Same as ANTH 434/634)

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: Sociology major, senior standing, and a minimum 3.00 GPA in Sociology coursework or permission of department chair. May only be taken once for credit.

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)

497 (697) Senior Seminar (3) Readings, discussion of problems, and presentation of papers. Prereq: SOC 201. (Same as ANTH 497/697)

**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 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-dimension 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) Laboratory 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 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 121, BIOL 120, MATH 140, or consent of instructor.

Spanish (SPAN):

101-102 Elementary Conversation (2, 2) Introductory course with emphasis on oral communication. Elective credit only. Does not satisfy foreign language requirement.

111 Elementary Spanish (4) 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 hours of lab.

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 completion of this course, students will take either SPAN 122 or 222, depending on their overall performance in SPAN 115 and their score on the final exam. Three one-hour lectures and two hours of lab.

122 Elementary Spanish (4) An introdutory course emphasizing listening, speaking, reading, and writing. Three one-hour lectures and two hours of lab. 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 hours of lab. 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. 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 compositional strategies. Grammar and stylistics appropriate for written Spanish. 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: SPAN 222 or instructor’s approval.

350 Masterpieces of Spanish and Span-American Literature (in English Translation) (3) In-depth discussion of selected literary masterpieces from Spain and Spanish-speaking countries in Latin America. Emphasis on characters, themes, and social trends which reflect the culture and traditions of the Hispanic world. No knowledge of Spanish required; taught in English. Does not count towards major, minor or Certificate of Proficiency in Spanish. 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: SPAN 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 Spanish Literature (3, 3) Selected readings to give students an acquaintance with important personalities, movements, and ideas in Spanish literature. 381: Beginning to 17th century. 382: 18th century to present. Research paper required for graduate credit. Prereq: SPAN 341 or 342 or departmental approval.
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.

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.

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 resumes, translation, and presentation of oral reports. Research paper required for graduate credit. Prereq: SPAN 341 or 342.

19th Century Spanish Literature (3) Study in depth of selected works. Prereq: SPAN 341 or 342 or instructor’s approval.

Contemporary Spanish Literature (3) Study in depth of selected works. Prereq: SPAN 341 or 342 or instructor’s approval.

Contemporary Latin-American Literature (3) Study in depth of selected works. Prereq: SPAN 341 or 342 or instructor’s approval.

Spanish and Latin-American Cinema (3) Study of major works in the 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.

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.

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 Topics for Non-Native Foreign Language Professionals (2-4) Intensive oral and written drill combined with specialized research projects. Concentrated study on areas of professional need and interest. Prereq: An undergraduate degree with a foreign language minor, or instructor’s approval.
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 Teaching Exceptional Children K-12 (3) The initial field-based experience in special education. Emphasis will be on observation participation. There will be 75 contact hours in the K-12 school setting. 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) The philosophy, methods, materials, settings and acceptable standards involved in the intervention and instructional procedures of early childhood-special education programs. Appropriate field experience for the home, hospital and school included. Prereq: SPED 300.

432 (632) Educational Procedures for Exceptional Children (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 population. 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 SPED 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: Admission to Teacher Education.

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).

**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 a comprehensive view of teaching as a profession including an understanding of the historical development, professional requirements, and opportunities in the teaching profession. Includes 10 clock hours of clinical laboratory experiences, directed observations, and limited participation in classroom settings. Coreq: PPST. Prereq: 2.50 GPA in English, communications and mathematics general education requirements.

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 30 clock hours of 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. Activities involve classroom testing and development. Includes 30 clock hours of 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 and TCED 302.

305 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. Includes 20 hours of 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.

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.

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.

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.

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.

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).

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 401 and TCED 412. Prereq: Admission to Teacher Education, TCED 475, 480, 485 and Reading requirements. See note above.

411 Student Teaching in Pre-K (6) Supervised student teaching in Pre-K for a minimum of 7.5 weeks. Must be taken with TCED 401 and TCED 412. Prereq: Admission to Teacher Education, TCED 475, 480, 485, and Reading 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 401 and TCED 409 or 411. Prereq: Admission to Teacher Education, TCED 475, 480, 485, and Reading requirements. See note above.

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. Sixty clock hours of pre-student teaching experience with a certified kindergarten teacher and a university supervisor. 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-8 majors); TCED 341 or TCED 351 (PreK-4 majors); for 675--Admission to Teacher Education.

480 (680) Emergent Literacy in the Content Areas: Language Arts, Social Studies, Math, Science, and Health (4) A four-hour methods course addressing the curricular 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 (birth to age eight years). Prereq: Admission to Teacher Education.

481 (681) Emergent Literacy (3) Exploration and examination of appropriate resources and strategies for emergent readers from ages 0-9. 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.

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: CFS 211, Admission to Teacher Education or major in Family and Consumer Sciences with concentration in: Child, Family, and Consumer Sciences and Education.

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. (Same as EDPG 712)

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. (Same as EDPG 716)

780 Principles and Techniques of Teaching (3) The course is designed to provide the candidate pursuing initial licensure the opportunity to engage and be 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, and assessment of initial outcomes. The class will meet for 90 minutes per week and will require 45 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.

Textiles, Clothing and Fashion Merchandising (TCFM):

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.

202 Fashion Selection and Personal Image (3) Principles and elements of design applied to the personal and professional clothing needs of men and women.

300 Clothing and Human Behavior (3) Functional and sociocultural aspects of dress and adornment in world cultures. Historical, technological, and economic influences.

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.

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 202.

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.

309 Fashion Merchandising Tour (1) Tour of wholesale and retail establishments in national fashion centers. A maximum of three hours credit can be counted toward a major. Prereq: Family and Consumer Sciences majors only or instructor’s permission.

405 Fashion Chronology (3) Apparel from ancient to modern times; factors influencing the development of contemporary fashion.

412 (612) Environmental Textiles (3) Selection of textiles based on design, use, and care in environ-mental applications. Prereq: TCFM 303 recommended.

415 (615) Fashion Design (4) Principles of fashion design using flat pattern techniques and computer aided design applications; including advanced clothing construction techniques. One one-hour lecture, two three-hour labs. Prereq: TCFM 103 or instructor’s approval. Graduate students will be required to complete a research project resulting in a written paper.

702 The Textiles and Clothing Consumer (3) Consumer problems as encountered during the life cycle; legislation and quality standards of current textile products.

703 Textile and Apparel Industry Issues (3) Domestic and international issues of current importance in the textile and apparel industry; production, consumption, and governmental policies.

704 Social, Psychological, and Aesthetic Analysis of Apparel (3) Analysis of social science theories and concepts applicable to clothing and appearance.

**Theatre (THEA):**

110-111 Understanding Theatre (3, 3) An overview of theatre as an art form. Introduction to the roles of the actor, director, designer. History and literature of the theatre. Basic theory and criticism.

150 Theatre Workshop (3) Supervised group projects in the construction of sets, painting, lighting, and costume making. Six hours of schedule work per week in preparation for a major production. May be repeated for credit.

201 Theatre Production (1-2) Practical application of theatre studies in a production environment. May be repeated for credit.

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 (1-2) Practical application of theatre studies in a production environment. May be repeated for credit.
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 laboratory theatre. Prereq: THEA 110 and 220 or permission of the instructor. May be repeated for credit.

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 scene study and circumstantial improvisations. Emphasizes the actor’s personal input into the process of creating a role. Focuses on the use of intentions and advanced script analysis. 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.

**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 a 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 a 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 a 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 a pass/fail basis.
Wildlife Biology (WBIO):

220 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.

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.

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.

350 Wildlife Management Techniques (4) This class will expose students to field and laboratory techniques commonly used in management of 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. Three hours lecture and one two-hour lab. Prereq: Be enrolled in Wildlife Biology or instructor’s approval.

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 of instructor’s approval.

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 MBIO 251.
251-252 Human Anatomy and Physiology (4, 4) An introductory course sequence including anatomy of the human body with emphasis on the principles of physiology. 251: Fundamentals of biology, integumentary, skeletal, articular, muscular, nervous system, including autonomic nervous system, and endocrine system physiology. 252: Physiology of the reproductive system, digestive system, blood and circulatory system, respiratory system and metabolism, excretory system and fluid and electrolyte balance. Course sequence offered for health science students. Course must be taken in sequence. 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.

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 lectures/laboratory classes. Prereq: BIOL 110-120.

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.

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.

321 Ornithology (3) Introduction to external structure, classification, migration, behavior, and phylogeny of birds. Most laboratory 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.

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 120.

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.

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.


442 (642) Animal Ecology Laboratory (1) Laboratory 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. Laboratory exercises with animals in their natural environment or in a laboratory 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 331.

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.

710 Entomology for Teachers (4) A survey of the class Insecta including morphology, physiology, ethology, ecology, and taxonomy of insects. Both field and laboratory experiences in collecting, identification, and collection maintenance are included.

730 Selected Topics in Geometry for Teachers (3) Selected topics in geometry through student research, seminars, or workshops. Prereq: Departmental approval