In order to reflect the expertise and interests of the faculty and to meet the needs of the student body, the University continually updates its course offerings. As courses are added to or removed from the curriculum and are modified, those changes are communicated in the online course descriptions. This is always the best source for up-to-date information. Many course descriptions indicate the academic term(s) during which the course is ordinarily offered.

The Arabic number in parentheses following the title of a course indicates the number of semester hours of credit. Because courses are offered in different formats, this does not necessarily indicate the number of hours of classroom work expected.

The prerequisites listed for a course indicate the level and type of experience a student must have prior to enrolling in the course. A student who has not met stated prerequisites must consult with the department/course instructor to ask for permission to enroll. Students enrolling in courses offered by the College of Business Administration and the College of Education and Human Development must meet all prerequisites.

A C/F hrs. notation indicates the hours of contact in a clinical or field setting as required by some education and human development courses.

Courses numbered 99 and below are developmental. Credit may not be applied toward any degree program. Courses numbered from 1000 to 2999 are ordinarily for freshmen, sophomores, and/or nonmajors. Courses numbered from 3000 to 4999 are ordinarily for juniors, seniors, and/or study in the major beyond the introductory level. For more information about eligibility to enroll in specific courses, check course prerequisites and consult academic advisors.

Course offerings for each semester are subject to student demand and staff availability. To determine whether courses in the courses descriptions list are being taught in a particular semester, please consult the current Schedule of Classes.

A course may be offered both at main campus and BGSU Firelands. Check the Schedule of Classes for up-to-date listings of class availability.

Subject: Accounting

ACCT 2000(3)
Accounting Concepts for Nonbusiness Students
Fall, Spring, Summer. Accounting concepts and procedures and their contribution to administrative processes. Enterprise analysis, relevant data, its uses and limitations. Not applicable to preprofessional core requirements in the College of Business Administration. No credit allowed toward BSBA degree. Prerequisite: sophomore standing or consent of department.

ACCT 2210(3)
Accounting and Business Concepts I
Fall, Spring, Summer. Concepts and issues of organizational reporting are introduced within the context of financial and managerial accounting, systems, taxation and auditing, and are illustrated through the use of examples involving international and domestic businesses, non-profit and government organizations. The course is designed to enhance group dynamics, communications skills, use of electronic media and inquiries into ethics and values within the accounting environment. Prerequisite: sophomore standing or consent of the department.

ACCT 2220(3)
Accounting and Business Concepts II
Fall, Spring, Summer. ACCT 2210 continued. Prerequisite: ACCT 2210.

ACCT 3210(3)
Intermediate Financial Accounting I
Fall, Spring. Development and application of financial accounting concepts and generally accepted accounting principles. Preparation of financial statements and accounting for changes in accounting principles. Emphasis on valuation and cost allocation methods for assets and related effects on income statements. Prerequisite: admission to the accounting specialization or consent of department.

ACCT 3310(3)
Cost Accounting
Fall, Spring, Summer. Cost determination and cost accounting systems. Cost analysis using regression methods. Job order, process, standard, and variable cost systems. Accounting for spoilage, service departments, and joint products. Prerequisites: STAT 2120 or STAT 2200.

ACCT 3410(3)
Individual Income Taxation
Fall, Spring, Summer. History, assumptions, objectives of federal tax system. Determination of an entity’s taxable and nontaxable incomes, capital gains and losses, deductions and exemptions, and special provisions. Reporting requirements and determination of tax liability. Introduction to federal tax research methodology. Prerequisite: admission to the accounting specialization or consent of department.

ACCT 4220(3)
Intermediate Financial Accounting II
Fall, Spring, Summer. ACCT 3210 continued with emphasis on long-term liabilities, investments, pensions, leases, earnings per share, and income tax allocation. Prerequisites: admission to the accounting specialization and grade of C or better in ACCT 3210, or consent of department.

ACCT 4250(3)
Accounting for Governmental and Not-for-profit Entities
Study of the unique features of government and not-for-profit accounting. Topics include capital acquisition, budgeting techniques, performance evaluation, and controls of various non-profit-oriented organizations. FASB and GASB reporting requirements relevant to various stakeholders are covered along with typical accounting systems. Prerequisite: ACCT 3210 or equivalent.
ACCT 4320(3)
Intermediate Managerial Accounting
Fall, Spring. Accounting's relationship to planning and control function. Budgeting, corporate planning models, cost-volume-profit analysis, relevant data, capital budgeting, data for operations research models, behavioral considerations, enriched variance systems, evaluation of performance and transfer pricing. Prerequisites: admission to the accounting specialization and grade of C or better in ACCT 3310, or consent of department.

ACCT 4420(3)
Corporate Income Taxation
Determination of taxable income and analysis of reporting requirements related to corporations. Application of federal tax laws to special problems of corporations, including stock redemptions, capital structure, liquidation, corporate acquisitions and corporate accumulations. Prerequisite: admission to the accounting specialization or consent of department.

ACCT 4440(3)
Estate Planning
Various estate planning tools and techniques. Taxation of transfers effected at death. Taxation of lifetime transfers and generation-skipping transfers. Concepts and computational aspects of federal and state income taxation of estates, trusts and their beneficiaries. Prerequisite: ACCT 3410 or equivalent.

ACCT 4510(3)
Auditing I
Fall, Spring. Auditing principles and procedures for independent verification of financial records and reviews of operations as used by internal auditors and public accountants. Nature of audit evidence, evaluation of internal controls, statistical sampling, computer auditing. Prerequisites: admission to the accounting specialization and grade of C or better in ACCT 4600, or consent of department.

ACCT 4560(3)
Information Systems Auditing and Control
Spring. Basic concepts of information systems audit and control principles necessary to facilitate the expression of an opinion on financial statements; evaluate the effectiveness, security, and functioning of controls; prepare a meaningful management letter. Introduces a computer auditing software package and uses the software to audit computerized information. Prerequisites: C or better in ACCT 4600, MIS 4210 and MIS 4700, or consent of department.

ACCT 4600(3)
Accounting Information Systems
Fall, Spring. General systems concepts and theory. The collection and processing of accounting information. Internal control aspects of accounting systems. Systems life cycle in an accounting framework. The interface of accounting systems and computer technology. Prerequisites: admission to the accounting specialization, MIS 2000 and C or better in ACCT 3210 or ACCT 3310, or consent of department.

ACCT 4890(1 - 3)
Internship Seminar
Fall. To be completed at first opportunity following suitable internship experience. Work experience to be preceded by at least 70 hours of academic credit and advance approval by program coordinator. No credit for students with other internship credit in College of Business Administration. Graded S/U.

ACCT 4910(1 - 3)
Studies in Accounting
To be arranged. Investigation in depth of selected areas or contemporary problems. May be offered individually as well as in classes depending on student needs and nature of material. Prerequisite: approval of department.

Subject: Academic Enhancement
ACEN 1000(2 - 3)
College Reading/Learning Skills
Fall, Spring, Summer. Designed to improve basic reading/learning habits of college students' vocabulary, comprehension, notetaking, time management, test taking, analytical and critical thinking. Lab required. Graded A-B-C-no credit. Summer 3 hrs.; fall and spring 2 hrs.; Firelands 2-3 hrs. Extra fee.

ACEN 1210(1) Transition Course
Transition to University life through orientation to University facilities and options; activities stressing study skills and personal growth.

Subject: American Culture Studies
ACS 2000(3)
Introduction to American Culture Studies
Fall, Spring, Summer. Regional, ethnic and economic aspects of American national experience as reflected in verbal, visual and material artifacts. Culture theory and models used to examine selected topics and problems. Required of all American culture studies majors. Applicable to the BG Perspective (general education) humanities and arts requirement.

ACS 2300(3)
Issues in American Civilization
Fall, Spring. Characteristically American themes, issues or problems reflecting relationships among ideas, values, traditions, events and personalities. Subject matter designated in schedule of classes; may be repeated once if topics differ.

ACS 2500(3)
Cultural Pluralism in the United States
Fall, Spring, Summer. Interdisciplinary exploration of race, ethnicity, class, gender and sexual orientation in the United States, emphasizing imaginative expressive forms, such as fiction, poetry, film and the visual arts. Applicable to the BG Perspective (general education) cultural diversity in the United States requirement.

ACS 2520(3)
Indigenous Cultures of North America
Fall. Field-based overview of the variety of indigenous North American cultures, both past and present, with emphasis on the use of archaeological record to interpret past lifeways. Focus on each culture's interactions with the physical and biological world. Taught in the field as part of a nine week field/camping trip across the United States. Corequisites: GEOL 2500, GEOL 2510, and ENVS 2530 with permission of instructor. Honors credit optional. Applicable to the BG Perspective (general education) cultural diversity in the United States requirement.

ACS 3000(3) Interpretations of American Culture
Fall. Spring. Approaches to the interpretive understanding and appreciation of American culture and society. Such theories as cultural studies, frontier thesis, feminism, critical race theory, cultural pluralism, etc. are incorporated into the interpretive study of various American cultural practices. Prerequisite: junior standing or consent of instructor. May be repeated once if topics differ. Applicable to the BG Perspective (general education) humanities and arts requirement.

ACS 3380(3) American Environmental History
Fall or Spring. Three centuries of changing American attitudes and actions toward natural environment, rise of conservation movement, and development of ecological perspective. Prerequisite GSW 1120. Credit allowed for only one of HIST 3380, ACS 3380.

ACS 4000(3) The Literature of American Culture Studies
Fall, Spring. Interdisciplinary approach to the institutional study of American culture. Course focus is on American culture, society, economy, politics, media, or other institutions from a broad interdisciplinary perspective. Prerequisite: senior standing or permission of instructor. May be repeated once if topics differ.

ACS 4850(3) Qualitative Research Methods
Fall. Introduces students to modes of qualitative social research commonly found in fields of ethnic studies and American culture studies. Focus on data gathering process as well as data analysis. Credit allowed only for one of ETHN 4850, ACS 4850.

ACS 4990(3) Capstone Tutorial in American Culture Studies
Spring. Independent study in preparation of ACS senior capstone project. Prerequisites: senior standing; tutor must be ACS joint-appointment or affiliated faculty member. Proposal, signed by proposed tutor, must be submitted for approval by undergraduate advisor in American Culture Studies prior to semester in which tutorial begins.

Subject: Accounting Technology
ACT 2250(3) Electronic Bookkeeping
Use of electronic bookkeeping software including general ledger, accounts payable, accounts receivable, invoicing, payroll, purchase orders, inventory, job cost and fixed assets. Computerized accounting using commercial general ledger packages. Prerequisite: ACCT 2210 and MIS 2000 or permission of instructor.

ACT 2310(3) Financial Accounting
Theory and application of generally accepted accounting principles as pronounced by the Financial Accounting Standards Board (FASB) and the Securities Exchange Commission (SEC). Designed for the associate of applied business accounting program at Firelands. Prerequisite: ACCT 2210.

ACT 2410(3) Cost Accounting I
Theory and application of job-order-cost systems, process cost systems and standard cost systems. Designed for the associate of applied business accounting program at Firelands. Prerequisite: ACCT 2220.

ACT 2510(3) Federal Income Tax
Theory and application of federal income tax as applied to the individual, sole proprietorship, partnership and corporation. Designed for the associate of applied business accounting program at Firelands.

Subject: Associate Early Childhood
AEC 2000(3) Child Wellness
This course emphasizes the conditions necessary to promote wellness in young children (age 0-8). Primary consideration will be on health, safety, and nutrition for healthy growth and development and on analysis of the impact of family, school, and community environments in promoting the health and well-being of children.

AEC 2750(3) Child Care Administration
Focuses on the organization and administration of programs for young children. This course focuses on the multiple roles of an administrator of child care, preschool, and after school programs. The course covers planning for the educational program, personnel management, fiscal management, and family involvement.

AEC 2800(3) Curriculum and Methods for Infants and Toddlers
Methods and materials for integrating and implementing curriculum that enhances the development of infants and toddlers (ages 0-3) with diverse cultural, familial, and developmental characteristics. Supervised participation with infants and toddlers in child care settings. 80 field experience hours. Transportation required. Prerequisite: HDFS 2210.

AEC 2910(3) Curriculum and Methods for Preschool
Supervised participation with preschool children in a preschool setting. This experience involves methods and materials for integrating and implementing curriculum that enhances the development of preschoolers (ages 3-5) with diverse cultural, familial, and developmental characteristics. Weekly seminar. 120 field experience hours. Transportation required. Prerequisites: HDFS 2210, HDFS 3030, and AEC 2800.
Subject: Aerospace Studies

AERO 1110(2)
Air Force Organization
Fall. Organization of the United States Air Force. Focus on missions involving airlift forces, strategic forces, tactical forces as well as overseas forces. Development and employment of weapons systems and logistic support functions. Leadership laboratory activities.

AERO 1120(2)
Air Force Organization
Spring. Organization of the United States Air Force. Focus on U.S. Defense policies, military balance between U.S. and eastern European forces as well as capabilities of Army, Navy and Reserve/Guard forces. Officership/professionalism and introduction to flight. Leadership laboratory activities.

AERO 2110(2)
Air Force History
Fall. Development of air power from the first lighter-than-air vehicles through to the establishment of the Department of the Air Force as an independent military force. Various concepts of employment of air power and factors which have prompted research and technological change. Examples of impact of air power on strategic thought. Leadership laboratory activities.

AERO 2120(2)
Air Force History
Spring. Development of air power since the establishment of the independent Air Force to the present. Various concepts of employment of air power and factors which have prompted research and technological change. Examples of impact of air power on strategic thought. Leadership laboratory activities.

AERO 3110(3)
Air Force Management
Fall. Integrated management course emphasizing individual as a leader in the Air Force. Human behavior, individual and in groups, historical development of management thought, discussion of classical leadership theory; oral and written communication, military writing and briefing formats. Leadership laboratory activities. Prerequisite: departmental approval.

AERO 3120(3)
Air Force Management
Spring. AERO 3110 continued. Air Force leadership, planning, organizing, coordinating, directing and controlling functions of management with emphasis on Air Force application, concept of command and staff, junior officer as administrative leader, Air Force personnel system, management of change, managerial strategy in changing environment. Leadership laboratory activities. Prerequisite: departmental approval.

AERO 4110(3)
American National Security
Fall. Role of the President, the Congress and National Security Council in national security policy making; American defense strategy; alliances; regional security; arms control. Leadership laboratory activities. Prerequisite: departmental approval.

AERO 4120(3)
American National Security
Spring. Air Force officer as part of national security forces; military law; laws of armed conflict; the military profession; transition to military life; relations with civilian community. Leadership laboratory activities. Prerequisite: departmental approval.

AERO 4910(1 - 3)
Air Force Issues
On demand. In-depth study of selected topics. Offered to individuals in lecture, seminar or independent study depending on student needs and nature of the material. May be repeated twice for up to six hours. Contact hours one to three hour/week. No special fees. Departmental permission required.

Subject: Aviation Studies

AERT 99(0)
Flight Evaluation
Student flight competency evaluation. Prerequisite: consent of instructor. May be repeated. Extra fee.

AERT 2150(3)
Aviation Ground Operations
An introduction to safety and security in airport and FBO ground operational activities, to include fueling, aircraft marshalling, ground vehicle operation, accident/incident response and reporting, and general aviation security. Prerequisites: none.

AERT 2200(4)
Private Pilot Ground School
Fall, Spring, Summer. Aerodynamics, aircraft systems, charts, airports, communication procedures, meteorology, regulations, aviation publications, flight computer, medical facts, radio navigation and cross country flight planning. FAA Private Pilot-Airplane written exam must be passed to receive course credit.

AERT 2220(2)
Private Pilot Flight Instruction I
Fall, Spring, Summer. Initial FAR Part 141 Private Pilot-Airplane basic flight training maneuvers and instruction through solo flight. Includes supplemental ground instruction. Prerequisite: AERT 2200, AERT 2240, or concurrent enrollment. Extra fee.

AERT 2230(2)
Private Pilot Flight Instruction II
Fall, Spring, Summer. Completion of requirements for Private Pilot-Airplane under FAR Part 141. Includes cross country flight requirements. Additional one hour per week arranged evening lecture is required. Prerequisites: AERT 2200, AERT 2220, AERT 2240 or concurrent enrollment. Extra fee.

AERT 2240(3)
Air Traffic Control and the National Airspace System
Fall, Spring. A study of the nation's air traffic control system. Focus on basic air traffic control procedures and regulations, FAA control facilities, FSS services, radio communication and navigation principles, safety, and new developments. Prerequisite: none.

AERT 2800(3)
Instrument Ground School
Fall, Spring. Instrument flight planning, meteorology, approach procedures, approach chart interpretation and instrument flight communications. FAA Instrument-Airplane written exam must be passed to receive course credit. Prerequisites: AERT 2230 and AERT 2240, concurrent enrollment in AERT 2810 or AERT 2820, or prior consent.

AERT 2810(3)
Basic Instrument Flight Instruction
Fall, Spring, Summer. First course in a sequence offering approximately half of the PIC cross country flight and dual basic instrument flight instruction required for the FAR Part 61 Instrument-Airplane rating or FAR Part 141 Commercial Pilot-Airplane certificate with Instrument-Airplane rating. Prerequisites: AERT 2230, AERT 2800 or concurrent enrollment. Extra fee.

AERT 2820(3)
Advanced Instrument Flight Instruction
Fall, Spring, Summer. (Formerly AERT 403). Second course in a sequence offering additional solo cross country flight and dual advanced instrument flight instruction required for the FAR Part 61 Instrument-Airplane rating or FAR Part 141 Commercial Pilot-Airplane certificate with Instrument-Airplane rating. Prerequisite: AERT 2810 or concurrent enrollment. Extra fee.

AERT 3000(3)
Air Transportation
Study of the common carrier air transportation system and the structure of commercial air carriers. Emphasis on scheduled air carrier organizations and activities. Prerequisite: none.

AERT 3060(1)
Multiengine Ground School
Theory of multiengine airplane operation including the ground instruction necessary for preparation for the FAA multiengine rating. Covers transition to multiengine aircraft, multiengine aircraft systems, operational considerations and emergency procedures. Prerequisite: AERT 3200.

AERT 3200(3)
Commercial Ground School
Spring. Aerodynamics, aircraft systems, commercial pilot operations, weight and balance, and complex aircraft operation. FAA Commercial Pilot-Airplane written exam must be passed to receive course credit. Prerequisite: AERT 2200 or prior consent.

AERT 3220(1)
Basic Commercial Flight Instruction
Fall, Spring, Summer. Aerodynamics, aircraft systems, commercial pilot operations, weight and balance, and complex, multiengine aircraft operations. Prerequisite: AERT 3200, AERT 2820, AERT 3060 or concurrent enrollment or consent of instructor. Extra fee.

AERT 3230(2)
Advanced Commercial Flight Instruction
Fall, Spring, Summer. Second course in a sequence offering additional instruction in aerodynamics, aircraft systems, commercial pilot operations, weight and balance, and complex, multiengine aircraft operations. Prerequisite: AERT 3220, AERT 3060 or concurrent enrollment or consent of instructor. Extra fee.

AERT 3300(2)
Digital Cockpit Instrumentation
Fall, Spring, Summer. Course offers dual flight instruction in the use of digital cockpit aircraft instrumentation, including systems differences, flight director, and autopilot use. Covers aircraft operational considerations to accomplish terminal instrument approach procedures in instrument meteorological conditions. Extra fee.

AERT 3480(3)
Airport Operations
Current practices in the operation, maintenance, management and safety of air carrier airports. Focus on airport certification requirements. Review organization and operation of major airport facilities. Prerequisite: Junior standing.

AERT 3490(3)
Aviation Law
A survey of significant aviation legal cases. Includes airport and passenger liability, tariffs, worker's compensation, manufacturer's and repairers liability, and national/international aviation legislation and regulation. Prerequisite: Junior standing.

AERT 3520(3)
Aviation Safety
Presentation and analysis of factors and procedures relating to aviation safety, techniques for accident prevention, development of safety programs, accident investigation analyses, and understanding human factors. Prerequisite: Junior standing.

AERT 3540(3)
Aviation Management
An introduction to management and operations in the aviation service industry. The various aspects and issues of small airports, fixed base operators and general aviation are discussed with a focus on current practices and procedures. Prerequisite: Junior standing.

AERT 3820(3)
Airport Operational Plans
Principles and concepts involved in the development and implementation of airport emergency, environmental, and security plans in response to federal requirements and technological advancements. Prerequisites: Junior
AERT 4040(3)
Advanced Aerodynamics and Aircraft Performance
Fall. Advanced flight theories including airfoil shape, drag, velocity, lift and thrust, stability and control; advanced principles of performance including capabilities, limitations, design criteria, weight and balance charts, comparative analysis of aircraft and certification of aircraft. Prerequisites: AERT 3200 or prior consent.

AERT 4050(3)
Advanced Aircraft Systems
Spring. In-depth discussion of electrical, mechanical and hydraulic systems on aircraft, design and performance standards, capabilities and limitations, conformance to FAA specification. Prerequisites: AERT 3200 or prior consent.

AERT 4070(1)
Multiengine Flight Instruction
Summer. Flight instruction in preparation for the FAA multiengine rating. Covers transition to multiengine aircraft and all normal, abnormal, and emergency operating procedures. Prerequisites: FAA Commercial Pilot-Airplane certificate with Instrument-Airplane rating, AERT 3060 or concurrent enrollment or prior consent. Extra fee.

AERT 4350(3)
Airport Administration
Concepts and practices involved in the administration of public use airport facilities and assets, to include finance and capital acquisition, grant administration, rates and charges, concession management, public and constituent liaison, and governmental operation. Prerequisite: Junior standing.

AERT 4400(2)
Aviation Instructor Ground School
Spring. (Formerly AERT 401). Learning theory in an aviation setting, instructor responsibility, lesson planning, and advanced aviation problems. To receive credit for this course FAA Fundamentals of Instructing and either Basic Ground Instruct or Flight Instructor-Airplane written exam must be passed. Prerequisite: AERT 3200.

AERT 4430(3)
Flight Instructor-Airplane
Fall, Spring, Summer. Ground and flight instruction preparing the student for the FAA Flight Instructor-Airplane Certificate. The course includes comprehensive coverage of aircraft systems, flight regulations, general flight knowledge, and flight maneuvers necessary for instructing private and commercial students. Prerequisites: AERT 4400 or concurrent enrollment, and FAA Commercial Pilot-Airplane certificate. Extra fee.

AERT 4450(1)
Flight Instructor-Instrument
Fall, Spring, Summer. Covers ground and flight instruction necessary to complete requirements for a flight instructor-instrument rating. The course includes presentation of methodology used in teaching instrument flight. Prerequisites: Instrument rating and FAA Flight Instructor-Airplane rating. Extra fee.

AERT 4470(1)
Flight Instructor-Multiengine
Principles and methodology of teaching multiengine flight. The course includes ground and flight instruction required to prepare for the FAA Flight Instructor-Airplane Multiengine rating. Prerequisites: FAA Flight Instructor-Airplane and instrument ratings. AERT 3060 and multiengine rating or concurrent enrollment. Extra fee.

AERT 4560(3)
Airport Planning and Design
A study of airport master planning and system planning requirements. Covers detailed aspects of the airport layout plan and airport design criteria. Evaluation is made of passenger and cargo terminal layout, ground access, land use planning and airspace requirements. One and one-half hour lecture and three-hour lab. Prerequisites: DESN 1040 or ARCH 1050 and ENGT 1100.

AERT 4600(3)
Safety Management Systems
An overview of the process for integrating safety into day-to-day aviation operations, to include safety goals and performance targets, risk assessments, responsibilities and authorities, rules and procedures, and monitoring and evaluation processes. Prerequisite: AERT 3480.

AERT 4820(1 - 3)
Flight Proficiency
Provides a specialized dual flight instruction course permitting the student and flight instructor to work on mutually agreed areas of proficiency. Prerequisite: consent of instructor. May be repeated to three hours. Extra fee.

AERT 4900(1 - 3)
Problems in Aviation Studies
For advanced students wanting to conduct intensive study of selected problems in aviation studies. May be repeated. Prerequisite: consent of college. Graded S/U.

Subject: Africana Studies
AFRS 2000(3)
Introduction to Africana Studies
Fall, Spring, and Summer. Regular and online course introducing students to the interdisciplinary methodology, crosscultural perspectives, literary genres, and critical-analysis skills needed to study peoples of African descent. Focus is on the arts and humanities. Applicable to the BG Perspective (general education) humanities and arts and international perspective requirements.

APRS 3000(3)
Special Topics in Africana Studies
Fall, Spring, Sum. Lectures and seminars on special topics with a focus on Africana themes and issues. Topics reflect research specialties of respective instructors. May be repeated if topics differ.

APRS 4000(3)
Africana Studies Capstone
Fall, Spring. Students frame a cross-cultural topic, organize and conduct a research-based, senior-level project and present their findings orally. Completing and reviewing portfolios is the final self-assessment activity for majors.

Subject: Applied Health Science
AHS 4050(3)
Case Studies in Health Care Administration
Application of problem solving to health care finance, human resource, ethics, policy, legal and reimbursement issues using skills learned in business classes. Prerequisite: BA 3250 or permission of instructor.

AHS 4100(4 - 10)
Practicum
Training in a health care setting. Emphasis is on application of knowledge and skills learned in the Applied Health Science curriculum. Settings include medical laboratories, health care agencies, medical research centers, clinical and administrative units of health care organizations and providers. Credit given at a ratio of 60 clock hours per credit hour. Prerequisite: Permission of instructor.

Subject: Allied Health Technology
AHTH 95(4)
Applied Basic Health Science
Developmental course in science skills and applied topics in physics, chemistry, and biology. Intended for students entering nursing or allied health programs. Offered only at Firelands College. Credit cannot be applied toward any degree program. Three hours of lecture/discussion and two hours lab. Graded A, B, C/No Credit. Students may not co-enroll in this course at the same time as any BIOL or CHEM course at 1000 level or above. Extra fee.

AHTH 1000(2)
Nursing Aide Standards
Basic nursing care, hygienic care, how to interact with people, health care safety issues. Follows State of Ohio Nursing Aide Training and Competency Evaluation Program Standards and Guidelines, preparing the eligible student to take the state examination to become a nurse aide. 59 hours lecture/lab; 16 hours clinical.

AHTH 1010(3)
Productive Interactions in Health Care
Designed for students entering a health-related discipline. Includes basic content in the foundational disciplines that support appropriate interactions in health care environments. Helps to clarify the dynamics of the health professional and patient relationship, enhances self understanding and develops an awareness of the larger societal and health care context in which the relationship takes place.

AHTH 1020(1)
Radiation Protection
An overview of the principles of radiation protection for radiographers, patients, personnel and the public. Radiation health and safety rules, the role of regulatory agencies and accreditation organizations are discussed.

AHTH 1100(2)
Medical Terminology
Vocabulary and terms used by medical personnel; prefixes, suffixes, word roots and their combining forms, usage, spelling and pronunciation; specialized terms within body systems and medical specialties. Two hours lecture.

AHTH 1290(4)
Essentials for Human Anatomy and Physiology
A one-semester course for students transitioning from LPN to RN diploma program. Study of basic terminology, anatomy, and physiology required to overview general body structure, function, and organization of organ systems in a healthy organism. Not equivalent to AHTH 1310 or BIOL credit. Satisfies a requirement in the FRMC LPN to RN only. Prerequisites: LPN diploma and permission by instructor. Offered at Firelands only.

AHTH 1300(3)
Basic Microbiology
Fundamentals of microbiology; emphasis on morphology, growth, genetics, pathogenic microorganisms and their control. Extra fee.

AHTH 1310(5)
Basic Anatomy and Physiology for Allied Health
Developed especially for students in allied health programs who have had no prior college course in introductory biology. Includes study of structure and function of cells and tissues, general body organization and organ systems. Four hours of lecture, two hours of lab. Extra fee.

AHTH 1320(3)
Applied Physical and Chemical Principles for Allied Health
Fall. Designed for the Allied Health Major. Physical and chemical principles and their application to health care technology. Emphasis is placed on managing the interface where patient and technology meet. Two hours lecture, two hours lab per week.

AHTH 1400(3)
Pharmacology for Allied Health
General pharmacological principles, including principles of drug action, calculating drug dosages, and a
survey of how selected drugs affect body systems. Substance misuse and abuse, over-the-counter and
alternative medications, intravenous and nutritional therapy, and miscellaneous agents are also presented.

AHTH 1410(1)
Survey of Pharmacology
Spring semester. Study of basic pharmacologic terminology and concepts, drug categories, mechanisms of drug
action, forms, routes of administration and common generic and proprietary name medications.

AHTH 1500(2)
Spanish for Healthcare Workers
Introduces medical phrases and oral and written communication in the Spanish language with emphasis on
pronunciation and essential phrases. Latino culture, greetings and essential medical history taking is also
presented. Prerequisite: SPAN 1010 and MEDT 3010, or consent of instructor.

AHTH 2300(4)
Pathophysiology
Disordered human functions and systems; language, causes and types of diseases; diseases of the body systems,
each described in terms of its etiology, pathology, symptoms and treatment. Four hours lecture. Prerequisite:
AHTH 1310.

AHTH 2900(1 - 3)
Special Topics in Allied Health
Special topics or current issues in allied health. Prerequisite: permission of instructor. May be repeated up
to six credit hours maximum if topics vary.

Subject: Apparel Merchandising/Product Development

AMPD 1510(3)
Apparel and Textile Industry
Fall, Spring. Overview of industry including mills, manufacturers, designers, retailers and impact of
technology in producing, distributing, and selling goods. Introduction to product development performed both
at the retail and manufacturing levels. Preface to career preparation and internships. Prerequisite: GSW
1120.

AMPD 2020(3)
Merchandising Math
Fall and Spring. Application course that focuses on the calculation and analysis of the selling price,
profitability, assortment planning, purchasing, and inventory control. Includes spreadsheet applications and
exercises. Prerequisite: MATH 1120 or MATH 1220 or higher.

AMPD 2510(3)
Apparel Studio 1: Assembly and Fit
Fall, Spring. Understand the processes within the product development model, focusing on the prototype
construction process. Understand techniques in assembling garments: shaping, joining and styling details for
apparel products. Quality standards emphasized. Application of fit and alteration methods. Prerequisite: AMPD
1510. Four contact hours. Extra fee.

AMPD 2810(3)
Textiles for Apparel
Fall, Spring. Analyze the interrelationships of the chemical and physical properties of fiber, yarn, fabric,
and finishes to the performance of the finished product. Identify fabric names and uses. Evaluate fabric
performance by durability, aesthetics, comfort, and care factors. Make recommendations about textile
problems. Prerequisite: AMPD 1510, AMPD majors only. Extra fee.

AMPD 3090(12 - 18)
F I T Visiting Student
Fall, Spring. Enrolled in a one-year FIT Visiting Student Program: either Advertising & Marketing
Communications or the Textile Development & Marketing Program. May be repeated. Prerequisites: acceptance
into the Fashion Institute of Technology-NYC, AMPD 2020, AMPD 2510, and AMPD 2810. Graded S/U.

AMPD 3120(3)
Apparel Studio II: Patternmaking
On demand. Technical and creative expression in applying patternmaking principles by the flat pattern and/or
fitting methods. Develop patterns from sketches or photographs. Revise patterns after constructing sample
garments. Prerequisite: AMPD 2510. Four contact hours. Extra fee.

AMPD 3130(3)
Textile Product Analysis
Spring. Evaluate apparel and textile products based on production techniques, specifications, and
price/quality relationships. Research current issues related to economics, environmental, and consumer needs
of textile products. Prerequisites: AMPD 2510 and AMPD 2810. Extra fee.

AMPD 3510(3)
Fashion Forecasting
Fall, Spring. Analysis of the fashion forecasting process; analysis of fashion dynamics of color, textile,
and style trends; and examination of marketplace dynamics to identify and analyze the connection between
consumer preferences and product. Prerequisites: AMPD 1510 and COOP 50. Extra fee.

AMPD 3890(1 - 3)
Supervised Field Experience in Apparel Merchandising & Product Development
Summer. Full-time work experience within an apparel or soft goods retail organization. Work settings are
approved on an individual basis. May be repeated. Graded S/U.

AMPD 4010(3)
History of Costume
Fall. Development of western costume from Egyptian times to present; emphasis on relation of modern costume
to earlier forms of dress.
AMPD 4020(3)
Merchandising Soft Goods
Fall, Spring. Merchandiser's role in planning, procuring, distributing, and promoting apparel products in a global market. Emphasis on retail mathematics for developing merchandise plans used to control profits and inventory. Introduction to technology used by merchandisers. Prerequisites: AMPD 1510, AMPD 2020, and MKT 3000. Contact Hours: 3.

AMPD 4030(3)
Consumer Analysis in Fashion
Fall, Spring. In depth examination of the processes involved when individuals or groups select, purchase, use or dispose of textiles and apparel products to satisfy needs and desires. Relevant topics include: consumer characteristics and implications in the fashion industry, fashion communication and decision making, ethics, and consumer protection within the textiles and apparel industry. Prerequisites: AMPD 1510, and MKT 3020 or AMPD 3090, AMPD majors only.

AMPD 4140(3)
Product Development Studio
Fall, Spring. Private label and product development processes. Develop a total concept for a line of garments, including fabrics, color palette style, and construction with emphasis on research, quality, and professional presentation, which meet acceptable standards. Prerequisites: AMPD 3130 and MKT 3000. Extra fee.

AMPD 4400(3)
Computers for Apparel Products
Fall/Spring/Summer. Understand the vital role of technology in the apparel and textile industry, implications for retailers involved in product development, merchandising, and marketing. Gain skills in using computer software to produce digital boards for private label collections. Prerequisites: AMPD 2810, AMPD 3510, and MKT 3000. Extra fee.

AMPD 4510(3)
Global Issues in Apparel and Textiles
Defines the scope and challenges of the apparel and textile industry in the global market. Examines theories, concepts, and problems relating to global trade of apparel and textile products. Prerequisites: AMPD 1510, AMPD 2810, ECON 2000 or higher, and junior standing.

AMPD 4890(1-8)
Internship in Apparel Merchandising & Product Development
Fall/Summer. Full-time internship position within an apparel or soft goods retail organization. Work settings are approved on an individual basis. May be repeated. Graded S/U.

AMPD 4990(12-21)
F I T Visiting Student
Fall, Spring, Summer. Visiting student studying at Fashion Institute of Technology in New York City. May be repeated. Prerequisite: acceptance to Fashion Institute of Technology. Graded S/U.

Subject: Arabic
ARAB 1010(4)
Beginning Arabic I
Introduction to modern standard Arabic. Four class periods and practice each week.

ARAB 1020(4)
Beginning Arabic II
ARAB 1010 continued. Four class periods and practice each week. Prerequisite: ARAB 1010 or equivalent.

ARAB 2010(4)
Intermediate Arabic I
ARAB 1010-1020 continued. Conversation, writing, reading, grammar. Four class periods and practice each week. Prerequisite: ARAB 1020 or equivalent.

ARAB 2020(4)
Intermediate Arabic II
ARAB 2010 continued. Four class periods and practice each week. Prerequisite: ARAB 2010 or equivalent.

Subject: Architecture & Environmental Design
ARCH 1050(3)
Design Representation I
Fall, Spring, Summer. Fundamental freehand and machine-assisted drawing principles necessary to the investigation, visualization and presentation of design ideas. Drafting methods and techniques including the principles of orthographic projection, paraline and perspective drawing. One hour of lecture and four hours laboratory. Extra fee.

ARCH 2050(3)
Design Representation II
Fall. Freehand and machine-assisted drawing principles necessary to the investigation, visualization and presentation of design ideas. Paraline and perspective drawing methods, shade and shadow, rendition of value and content, sketching and architectural presentation techniques. One hour of lecture and four hours laboratory. Prerequisite: ARCH 1050. Extra fee.

ARCH 2220(3)
Design Studio I
Spring. Introduction to architecture and environmental design problem solving. Topics include: anthropometrics, human-environment interaction, principles of form, style, order, proportion, scale and balance; concepts of programming and diagramming. One hour of lecture and four hours laboratory. Prerequisite: C or better in ARCH 2050. Extra fee.

ARCH 2310(3)
History of Architecture
Fall. Survey of architecture in social, cultural, aesthetic, and technical aspects, providing a substantial amount of information and insight about the inheritance of architecture in both practice and theory. Applicable to the 05 Perspective (general education) humanities and arts and international perspective
requirements.

ARCH 2360(3)
Mechanical and Electrical Building Systems I
Fall, Spring, Summer. Mechanical and electrical building systems including review of scientific principles used in system design. Topics include equipment description and selection, system types, system components and basic design. Prerequisite: ARCH 1050.

ARCH 2710(3)
Computer-Aided Design for Architecture
Fall, Spring, Summer on demand. Intermediate course emphasizing the role of computer applications, including 3D surface, solid, and parametric modeling in architectural design and presentation as well as in professional practice. Prerequisite: ENGT 1100.

ARCH 3210(6)
Design Studio 2
Fall. Studio course focusing on formal, theoretical, technical, and legal issues in architecture related to site design, interior and exterior spatial relationships, and building form with an emphasis on the influence of site and topography on architectural form. Prerequisite: C or better in ARCH 2220. Extra fee.

ARCH 3220(6)
Design Studio 3
Spring. Formal design studio focusing on the design of moderately complex structures emphasizing programming and adjacency analysis, the relationship of building envelope and structure, and the relationship between built form and site. Prerequisite: C or better in ARCH 3210. Extra fee.

ARCH 3310(3)
Theory in Architectural Design
Spring. Lecture and panel discussion sessions on topics in architectural design theory. Prerequisite: ARCH 2220 (formerly ARCH 250), junior standing or permission of instructor.

ARCH 3360(3)
Architectural Materials and Systems
Fall. Building systems approach to understanding architectural elements of buildings. Topics include fire protection, thermal and moisture protection, coatings, doors and windows, curtain walls, ceiling systems. Two hours lecture and two hours laboratory. Prerequisites: ARCH 2360 and junior standing. Extra fee.

ARCH 3370(3)
Mechanical and Electrical Building Systems II
Spring. Laboratory course investigating applications of mechanical and electrical building systems. Analysis of existing systems, system design, system modeling and report writing. Topics include water and sanitary waste systems, electrical distribution systems, HVAC systems and lighting design. One hour of lecture and four hours of laboratory. Prerequisite: ARCH 2360 or permission of instructor. Extra fee.

ARCH 3720(3)
Advanced Computer Aided Design for Architecture
Spring, Summer on demand. Advanced study focusing on the use of advanced 3D computer modeling, rendering, and animation techniques for development and presentation of architectural design solutions. Prerequisites: ARCH 2220 (formerly ARCH 250) and ARCH 2710 (formerly ARCH 132) or instructor's permission. Extra fee.

ARCH 4010(3)
Historic Preservation
Fall. Review of history of building styles, research methods, preparation of historic building inventory forms, principles of restoration and renovation, and architectural design methods for historic environments. One hour lecture and four hours laboratory. Prerequisites: ARCH 2220 (formerly ARCH 250) and junior standing.

ARCH 4210(6)
Design Studio 4
Fall. Fourth course in architectural design sequence focuses on the study of urbanism and the creation of site-specific architecture. Students study cities in the USA and abroad and then apply architectural concepts to design in urban environments. Prerequisite: C or better in ARCH 3220. Extra fee.

ARCH 4220(6)
Design Studio 5
Spring. This intensive studio course represents the culmination and recapitulation of all previous courses in the undergraduate degree program: a capstone. This design course pursues a holistic and integrated approach to architectural design. Emphasis is placed on the development by each individual student of a selected design problem. Prerequisite: C or better in ARCH 4210. Extra fee.

ARCH 4900(1 - 3)
Problems in Architecture/Environmental Design Studies
On demand. For advanced students wanting to conduct intensive study of selected problems in architecture/environmental design studies. Prerequisite: junior standing and consent of adviser. May be repeated. Graded S/U.

Subject: Art

ART 1010(3)
Introduction to Art
Fall, Spring, Summer. Historical and aesthetic components of art with laboratory or online experiences with basic elements of creative expression. Non-majors only. Two hours studio, two hours lecture. Applicable to the BG Perspective (general education) humanities and arts requirement. Extra fee.

ART 1020(3)
Design Studio: Surface and Process
Fall, Spring. Studio explorations of art making and visual communication. The course is composed of two workshops: 2D Design--introduction to the elements and principles of visual organization; and Art Methods & Practices--introduction to studio-based research, visual problem solving, creative strategies, and practical application of theories of visual signification. Required of art majors and minors. Can be taken with ART 1030 or ART 1120. Extra fee.
ART 1030(3)
Drawing Studio: Perception and Color
Fall, Spring. Studio explorations of drawing, light and color. Visual discernment and drawing skills are developed in two workshops: Drawing from observation--introduction to the tools and techniques for accurate and expressive draftsmanship; and Color and Light--practical application of color theory and lighting effects for accurate representation and expressive communication. Required of art majors and minors. Can be taken with ART 1020 or ART 1120. Extra fee.

ART 1120(3)
Media Studio: Space and Time
Fall, Spring. Creative explorations of sculptural and time-based art. Principles of construction and design of works extended in space and time. The course is composed of two workshops: 3D Design--organization of space and form, exposure to various construction methods, tools and materials; and 4D Design--introduction to chronological design concerns, kinetics, installation, audience, actions and documentation. Required of art majors and minors. Can be taken with ART 1020 or ART 1030. Extra fee.

ART 4700(1 - 3)
Independent Study
Supervised individual problems in selected studio research for students who have shown proficiency and marked degree of independence in other studio coursework. May be repeated. Prerequisite: consent of instructor. Extra fee.

ART 4890(1 - 3)
Internship in Arts Management
Designed for students seeking to gain field experience under the guidance of a professional arts administrator, educator, or gallerist. Will provide students with practical information and skills related to a variety of careers in arts management. Repeatable to nine hours; limited to six hours with same institution/agency. Graded S/U.

Subject: Digital Art
ARTC 2010(3)
Introduction to Digital Arts
Fall, Spring. General introduction to methods of producing original and creative digital arts including 2D imaging, 3D modeling, rendering, 2D animation, and interactive multimedia. Five studio hours. Prerequisites: ART 1020, ART 1030, ART 1120; may be taken concurrently. Extra fee.

ARTC 3110(3)
Intermediate 3-D Modeling
Fall, Spring. Concepts and techniques of 3-D computer modeling and rendering. Course includes geometric modeling, surface properties, texturing, lighting, and rendering techniques. Focus on creative idea development using 3-D virtual space. Five studio hours. Prerequisites: ARTC 2010, ART 1020, ART 1030, ART 1120 or consent of instructor. Extra fee.

ARTC 3120(3)
Intermediate 3-D Digital Animation
Fall, Spring. Concepts and techniques of 3-D digital animation. Course includes keyframing, particle systems, dynamic simulation, and basic kinematic techniques as well as principles of traditional animation and concepts development. Five studio hours. Prerequisite: ARTC 3110 or consent of instructor. Extra fee.

ARTC 3210(3)
Intermediate Digital Imaging Art
Fall, Spring. An artistic exploration of 2D paint, image manipulation, and vector based programs using various peripherals such as scanners, tablets, digital cameras, and image capture techniques. Investigation of artistic digital printing technology. Five studio hours. Prerequisites: ARTC 2010, ART 1020, ART 1030, ART 1120 or consent of instructor. Extra fee.

ARTC 3310(3)
Intermediate Interactive Art
Fall, Spring. Basic concepts of digital interactive multimedia art. Emphasis on interactive nonlinear structures and interface design. Creative idea development which integrates image, text, animation, and audio with programming. Five studio hours. Prerequisites: ARTC 3210, CS 2010 or consent of instructor. Extra fee.

ARTC 4000(1 - 3)
Special Topics in Digital Arts
Fall, Spring, Summer. Various topics chosen to meet digital arts curriculum needs. Topics will address issues related to studio techniques or historical and contemporary theory. Five studio hours. Prerequisites will be announced for each offering. May be repeated to twelve hours. Extra fee.

ARTC 4090(3)
Professional Practices and Presentation in Digital Arts
Fall. Advanced exploration of artistic direction and career planning. Development of artistic portfolio, professional presentation packages, and post graduation plans. Five studio hours. Prerequisite: senior standing and ARTC 3120, ARTC 3210, ARTC 3310. Extra fee.

ARTC 4130(3)
Digital Character Animation I
Fall. The course is the first of a two-course sequence. 3D animation pre-production including narrative language and storytelling, scriptwriting, storyboarding, character design, animatics, and advanced character modeling for animation. Five studio hours. May be repeated to six hours. Prerequisites: ARTC 3120 or consent of instructor. Extra fee.

ARTC 4140(3)
Digital Character Animation II
Spring. The course is the second of a two-course sequence. Digital character animation production and post-production including advanced animation techniques, inverse and forward kinematics, facial animation, binding techniques, video referencing, rotoscoping, cinematography, lighting, compositing, and editing for the final production. Five studio hours. Prerequisites: ARTC 4130 or consent of instructor. May be repeated to six hours. Extra fee.
ARTC 4180(3) Senior Studio in Digital Arts
Fall, Spring. For Digital Arts majors with a specialization in animation, digital imaging, or interactive multimedia. Supervised individual research as it applies to the final exhibition of digital artworks for the BFA degree. Five studio hours. Prerequisite: ARTC 4130, ARTC 4230, or ARTC 4330 or consent of instructor. May be repeated to six hours. Extra fee.

ARTC 4230(3)
Advanced Digital Imaging Art Studio
Spring and/or Fall. Advanced artistic development using imaging techniques such as digital paint, image manipulation, and digital video. Investigation of artistic image output and representation through print, installation, or time based work. May be repeated to six hours. Five studio hours. Prerequisite: ARTC 3210 or consent of instructor. Extra fee.

ARTC 4240(3)
Alternative Digital Print
Investigation of a variety of non-standard ways to realize artworks that start with digital images. This includes various handmade printing substrates, printing and transfer methods, pre-print alterations, and post print additions. Six studio hours. Prerequisite: ARTC 3210 or consent of instructor. May be repeated to six hours.

ARTC 4330(3)
Advanced Interactive Art Studio
Spring and/or Fall. Creative production of advanced digital interactive multimedia art. Exploration of emerging technologies as well as a more in-depth study of programming and designing artistic interactive experiences. May be repeated to six hours. Five studio hours. Prerequisite: ARTC 3310 or consent of instructor. Extra fee.

ARTC 4410(3)
Collaborative Multimedia Development
Spring. Focus on teamwork and creative application of multimedia and digital animation techniques to solve real-world problems. Five studio hours. Prerequisites: ARTC 2010, ARTC 3210, or consent of instructor. May be repeated to six hours. Extra fee.

ARTC 4420(3)
Art and Virtual Environments
On Demand. Independent and group work addressing the theories, technologies, expectations, and applications of Virtual Environments and 3D Gaming. Students will work with hardware and software configurations to build interactive 3D environments. Five studio hours. Prerequisites: ARTC 3120, ARTC 3310 or consent of instructor. May be repeated to six hours. Extra fee.

ARTC 4430(3)
Artistic Animation Effects
On Demand. Creative development of animation and special effects using non-geometric modeling such as particle systems and dynamics. Focus on artistic, technical and conceptual aspects of advanced animation techniques and compositing. Five studio hours. Prerequisite: ARTC 3120 or consent of instructor. May be repeated to six hours. Extra fee.

ARTC 4440(3)
Digital Video Art
On Demand. Creative production of time-based art using digital video and effects. Emphasis on video concepts, techniques, composition, sequencing of ideas, and narrative as well as non-narrative structures. Introduction to the history of video art as an art form and experimental approaches to video art and performance. Five studio hours. Prerequisite: ARTC 3210 or consent of instructor. May be repeated to six hours. Extra fee.

ARTC 4700(1 - 3)
Independent Study in Digital Arts
On demand. Supervised individual problems in selected digital arts studio research for students that have shown technical and artistic proficiency and the ability to work independently in other studio courses. May be repeated to six hours. Prerequisite: consent of instructor. Extra fee.

ARTC 4890(3)
Computer Art Practicum
On demand. Placement within professional studios to provide opportunities for application of course work. Students work through the Co-op Office to set up internships with employers. May be repeated to six hours. Prerequisite: Consent of division. Graded S/U.

ARTC 4950(1 - 3)
Workshop in Digital Arts
On Demand. Various topics chosen to meet digital arts curriculum needs. Topics will address issues related to studio techniques or historical and contemporary theory. Five studio hours. Prerequisites will be announced for each offering. May be repeated to twelve hours if the content is different.

Subject: Art Design
ARTD 2010(3)
Principles of Graphic Design
Fall, Spring. Introduction to, and exploration and application of: design elements and principles, tools, techniques, and terminology of the discipline. Introduction to design history, visual communications theory and critical thinking. Development of oral, visual, and cognitive communication/presentation and conceptualization skills. Five studio hours. Prerequisites: ART 1020, ART 1030, and ART 1120. VCT majors: VCT 1030 and VCT 1040. Extra fee.

ARTD 2020(3)
Principles of Typography
Fall, Spring. Introduction to, and exploration and application of: typographic history, principles, tools, techniques, and terminology. Discussion of visual communication theory and critical thinking. Continued development of oral, visual, and cognitive communication/presentation and conceptualization skills. Five studio hours. Prerequisite: ARTD 2010. Extra fee.
ARTD 3010(3)
Intermediate Graphic Design

ARTD 3030(3)
History of Graphic Design
Spring only. Survey course covering the history of graphic design from 1850 to the present. Exploration of the relationship of graphic design to movements in art, architecture, music, film, and literature and the collective influence of these movements on western culture.

ARTD 3040(3)
Three Dimensional Graphic Design
Fall only. Advanced exploration in graphic design principles and techniques with a strong emphasis on three-dimensional design issues. Includes development of packaging, direct mail campaigns, and environmental graphics. Five studio hours. Prerequisites: successful completion of School of Art BFA Portfolio Review, Graphic Design Portfolio Review, and ARTD 2020. Extra fee.

ARTD 3050(3)
Graphic Design Processes & Procedures
Spring only. Comprehensive technical lecture and lab course covering, but not limited to, the processes and procedures of print and paper specification, and electronic pre-press production, as well as an in-depth exploration of the software and hardware utilized. Introduction to proper design studio management practices and third-party support vendor operations and interaction (printers, photographers, etc.). Material presented through a series of lectures, demos, written tests and field trips. Five lecture/lab hours. Prerequisites: ARTD 3010 and ARTD 3040. Extra fee.

ARTD 3060(3)
Graphic Design Theory
Spring only. Advanced exploration of the interrelationship between communication theory and application. Emphasis on developing awareness of a range of theoretical approaches leading to solutions for complex communication problems. Five studio hours. Prerequisites: ARTD 3010 and ARTD 3040. Extra fee.

ARTD 4030(3)
Identity Design
Fall only. Introduction to, and exploration and application of identity design and graphic/marketing programs, with a practical emphasis on conceptual and strategic thinking and writing within the context of brand awareness. Output to include the development of a comprehensive system of interrelated applications based on intuitive and investigative research of an organization and its intended audience(s). Continued development of oral, visual, and cognitive communication/presentation skills. Five studio hours. Prerequisites: ARTD 3050 and ARTD 3060. Extra fee.

ARTD 4050(3)
Interactive Graphic Design
Fall only. Continued exploration and application of design principles and techniques, with specific focus on the digital realm. Specific introduction to, exploration and application of: information architecture theory, user interface design principles, pixel-based typography, and experimental, sequential and interactive modes of communication. Five studio hours. Prerequisites: ARTD 3050 and ARTD 3060. Extra fee.

ARTD 4060(3)
Graphic Design Practicum
Introduction to, and hands-on field experience in, the fundamentals of studio-based business operations. Work in fully operational Division-run graphic design studio, within a dynamic group structure. Practical application of all skills and knowledge. Supplemented by field trips, guest lecturers, reading, research, and ongoing project responsibilities. May be repeated to 6 credit hours. Maximum of 6 credit hours may be applied to Studio Art Support. Prerequisites: Competitive portfolio review, plus ARTD 3050 and ARTD 3060. Extra fee.

ARTD 4080(3)
Senior Studio in Graphic Design
Spring only. Development of skills in preparation for entrance into design profession. Focus on creation of personal identity system, professional resume, cover letter, and self-promotion. Continued development of oral, visual, and cognitive communication/presentation skills (i.e., interviewing techniques, salary negotiations, etc.). Refinement of existing body of work, and development of professional portfolio, for inclusion in end-of-semester Senior Graphic Design Portfolio Show. Five studio hours. Prerequisites: ARTD 4030 and ARTD 4050. Extra fee.

ARTD 4700(1 - 3)
Independent Studies in Design
Supervised individual problem in selected design research for students who have shown proficiency and marked degree of independence in other design coursework. May be repeated. Prerequisite: consent of instructor.

ARTD 4890(3 - 6)
Graphic Design Internship
Real-world field experience at approved internship site. Credit approved upon submission of portfolio and written evaluation of experience, in consultation with site and faculty advisor. May be repeated to six credit hours. Maximum of six credit hours may be applied to BFA Graphic Design "Studio Art Support" area. Prerequisites: ARTD 3010, ARTD 3030, and ARTD 3040 or consent of Division Chair. Graded S/U.

ARTD 4950(1 - 3)
Special Topics in Design
On demand. Innovative and intensive group studies in selected design research. Prerequisites announced for each offering. May be repeated.

Subject: Art Education

ARTE 2440(2)
Art for Early Childhood Education
Fall, Spring, Summer. Introduction to art education for prekindergarten through third grade, approaches to
planning and teaching developmentally appropriate art learning activities in preschool settings and elementary schools. Prerequisite: Sophomore standing. Extra fee.

**ARTE 2450(2)**

**Art for Middle Childhood Education**

Fall, Spring, Summer. Introduction to art education for grades four through eight, approaches to planning and teaching developmentally appropriate art learning activities. Prerequisite: Sophomore standing. Extra fee.

**ARTE 2520(3)**

**Foundations of Art Education**

Fall, Spring. Introduction to historical and contemporary approaches to art education. Includes field experiences in area schools and study of child art development. Prerequisites: Sophomore standing; PSYC 1010; a grade of "C" or better in GSW 1120; minimum GPA of 2.75. C/F hours: 40. Extra fee.

**ARTE 3420(3)**

**Digital Technology in Art Education**

Fall, Spring. Digital imaging, multimedia equipment, and the internet to create computer-generated art, visuals, art history timelines and portfolios for instructional use. Emphasis placed on curricular units using computer-based studio activities, mapped internet searches and digital imaging. Prerequisites: ARTE 2520 and junior standing. Extra fee.

**ARTE 3520(3)**

**Expression and Response in Art Education**

Fall, Spring. Studio practices and art criticism methods for preschool through young adult learners; introduction to curriculum development and lesson planning; preschool field-based practicum. Prerequisites: ARTE 2520, junior standing. May be taken concurrently with ARTE 3820. C/F hours: 40. Extra fee.

**ARTE 3820(3)**

**Art for Special Needs Learners**

Fall, Spring. Art teaching methods for exceptional populations in regular and alternative settings. Includes a field-based practicum. Prerequisites for art education majors: ARTE 2520; junior standing. Prerequisite for other majors: sophomore standing. May be taken concurrently with ARTE 3520. C/F hours: 40. Extra fee.

**ARTE 4070(3)**

**Visual Arts Teaching Practicum**

Fall, Spring. Implementation of planned curricula, teaching methods, and assessment strategies in School of Art's Saturday Art Program (ages 3-17). Prerequisites: ARTE 3420, ARTE 3520, ARTE 3820. May be taken concurrently with ARTE 4520. C/F hours: 70. Extra fee.

**ARTE 4520(3)**

**Advanced Methods in Art Education**

Fall, Spring. Curriculum development in art criticism, art history, and aesthetics for middle childhood through young adult; includes a related field-based practicum. Assessment, classroom management, curriculum issues. Prerequisites: ARTE 3420, ARTE 3520, ARTE 3820. May be taken concurrently with ARTE 4070. C/F hours: 20. Extra fee.

**ARTE 4700(1 - 3)**

**Independent Studies in Art Education**

Supervised individual problems in selected art education research for students who have shown proficiency and marked degree of independence in other art education coursework. May be repeated. Prerequisite: consent of instructor.

**ARTE 4920(7)**

**Teaching Internship**

Fall, Spring. Classroom teaching under supervision on full-day basis at early childhood/middle childhood levels, including conferences and seminars. Required for State multi-age licensure in visual arts. Eligibility requirements must be met. C/F hrs.: 35 hours per week. Graded S/U. Extra fee.

**ARTE 4950(1 - 3)**

**Special Topics in Art Education**

Workshop topics and intensive group studies relative to special needs of visual arts teachers. May be repeated.

**ARTE 4970(7)**

**Teaching Internship**

Fall, Spring. Classroom teaching under supervision on full-day basis at middle childhood/adolescent through young adult levels, including conferences and seminars. Required for State multi-age licensure in visual arts. Eligibility requirements must be met. C/F hrs.: 35 hours per week. Graded S/U. Extra fee.

**Subject: Art History**

**ARTH 1450(3)**

**Western Art I**

Fall, Spring. Ancient and Medieval art. Applicable to the BG Perspective (general education) humanities and arts requirement.

**ARTH 1460(3)**

**Western Art II**

Fall, Spring. Art from Renaissance to present. May be taken before ARTH 1450. Applicable to the BG Perspective (general education) humanities and arts requirement.

**ARTH 4400(3)**

**Modern Architecture**

Architecture of 19th and 20th centuries in Europe and America. Prerequisite: junior or senior standing or consent of instructor. Extra fee.

**ARTH 4410(3)**

**American Art to the Civil War**

Painting, sculpture and architecture of colonial era and United States to 1860; interrelationship between visual arts and significant issues in American culture. Prerequisite: junior or senior standing or consent of
ARTH 4420(3)
American Art Since the Civil War
Painting, sculpture, architecture and photography of United States from 1860 to present. Special attention to artists and developments prior to World War II frequently overlooked in surveys of modern art. Prerequisite: junior or senior standing or consent of instructor.

ARTH 4430(3)
Histories of Photography: Theory and Criticism from Invention to WWI
Critical survey of primarily European and American photography from roughly 1839 to 1918. Discussion of major photographers and art movements over time. Emphasis on photography's pre-history, its dualistic birth in France and England, and on the industrial, technological, and aesthetic changes of the period. Comparison of different and at times antagonistic historians, theorists, and critics of this distinctly "modern" medium. Prerequisite: junior or senior standing or consent of instructor. Extra fee.

ARTH 4440(3)
Histories of Photography: Theory and Criticism from WWI to Present
Critical survey of primarily European and American photography from roughly 1914 to the present. Discussion of major photographers and art movements over time. Emphasis on photography's transition from hand-made materials into the age of mass-production, and on the technological, theoretical, and aesthetic changes of the period. Comparison of different and at times antagonistic historians, theorists, and critics of this evolving "post-modern" medium. Prerequisite: junior or senior standing or consent of instructor. Extra fee.

ARTH 4450(3)
Preclassical Art
Art and archaeology of preclassical Aegean world to the end of the Bronze Age; the Minoan and Mycenaean civilizations. Prerequisite: junior or senior standing or consent of instructor.

ARTH 4460(3)
Greek Art
Art of Greece from the Dark Ages through the Hellenistic period: emphasis on vase-painting, sculpture and architecture. Prerequisite: junior or senior standing or consent of instructor.

ARTH 4470(3)
Art of Etruria and Rome
Etruscan and Roman sculpture, architecture and painting from the 8th century B.C. to the 5th century A.C. Prerequisite: junior or senior standing or consent of instructor.

ARTH 4480(3)
Early Christian and Byzantine Art
Christian art to the medievalization of the Roman empire in the west and Byzantine art to the fall of Constantinople in 1453. Prerequisite: junior or senior standing or consent of instructor.

ARTH 4490(3)
Medieval Art
Art and architecture from medievalization of Roman Empire through High Gothic period. Prerequisite: junior or senior standing or consent of instructor.

ARTH 4510(3)
Art of the Italian Renaissance
Painting, sculpture and architecture of Italy during the Renaissance, from the late 13th century through the 16th century and Mannerism. Prerequisite: junior or senior standing or consent of instructor.

ARTH 4530(3)
Northern Renaissance Art
Painting, sculpture and graphic arts of Flanders, France, Germany, England and Spain during the 15th and 16th centuries. Prerequisite: junior or senior standing or consent of instructor.

ARTH 4540(3)
Baroque and Rococo Art
The painting, sculpture and architecture of Italy, Spain, France and the Low Countries in the 17th and 18th centuries. Prerequisite: junior or senior standing or consent of instructor.

ARTH 4550(3)
Art of the 19th Century
Painting and sculpture in the 19th century in Europe from neoclassicism through post-impressionism. Prerequisite: junior or senior standing or consent of instructor.

ARTH 4560(3)
Art of the Early 20th Century
Major movements in painting and sculpture in Europe and America from Fauvism to World War II; theoretical bases as well as formal innovations. Prerequisite: junior or senior standing or consent of instructor. Extra fee.

ARTH 4570(3)
Art of the Later 20th Century
Major movements in painting and sculpture in Europe and America from World War II to the present; traditional art forms as well as the more radical recent developments. Prerequisite: junior or senior standing or consent of instructor.

ARTH 4580(3)
Art of India and S.E. Asia
Art and architecture in India and S.E. Asia from the earliest times to present. Prerequisite: junior or senior standing or consent of instructor. Applicable to the BG Perspective (general education) humanities and arts and international perspective requirements. Extra fee.

ARTH 4590(3)
Art of China and Japan
Art and architecture of China and Japan from earliest cultures to present. Prerequisite: junior or senior
standing or consent of instructor. Applicable to the BG Perspective (general education) humanities and arts and international perspective requirements.

ARTH 4600(3)
Women and the Visual Arts
Alternate years. Historical survey of the role of women in the fine arts, in their capacities as artists, critics, matrons (patrons) and audiences from antiquity to the present. Emphasis on examining issues relevant to the contemporary situation in the arts and society. Prerequisite: junior or senior standing or consent of instructor.

ARTH 4610(3)
Art of Western Africa
Survey of Western African art within its cultural, historical, social, and spiritual context. Discussion of a representative range of peoples from a variety of cultures, time periods, and geographic locations. Gives student a better understanding and appreciation of this complex art. Prerequisite: junior or senior standing, or consent of instructor. Applicable to the BG Perspective (general education) humanities and arts and international perspective requirements. Extra fee.

ARTH 4620(3)
Art and Power in Africa
Exploration of selected African ethnic groups, how they use art to create, manipulate, and negotiate power. Discussions on the political, spiritual, social, economic, and moral manifestations of power and the art that makes it so. Prerequisite: junior or senior standing, or consent of instructor. Applicable to the BG Perspective (general education) humanities and arts and international perspective requirements.

ARTH 4630(3)
Women and Art in Africa
Discuss the vital role of women--as art producers, consumers, and vendors--in selected ethnic groups across Africa. Will look at art of, for, by, and/or about women, and how these arts are essential to the various cultural groups discussed. Wil consider cultural, historical, economic, social, and spiritual aspects, particularly in relation to ceramics, textiles, sculpture, masking, and body arts. Prerequisite: junior or senior standing, or consent of instructor. Applicable to the BG Perspective (general education) humanities and arts and international perspective requirements.

ARTH 4660(3)
Pre-Columbian Art
Survey of the art and cultures of the peoples of Pre-Columbian Mexico. Pottery and ceramic sculpture, monumental stone carving, precious and semi-precious stone carving, and architecture considered in its social, religious, political, and cultural contexts. Prerequisite: junior or senior standing, or consent of instructor. Applicable to the BG Perspective (general education) humanities and arts and international perspective requirements.

ARTH 4680(3)
Oceanic Art
Survey of the art and cultures of selected islands in the Pacific Ocean. Will look at sculpture, jewelry, weaponry, household objects, boats, and architecture for clues to these cultures. Prerequisite: junior or senior standing, or consent of instructor. Applicable to the BG Perspective (general education) humanities and arts and international perspective requirements.

ARTH 4700(1 - 3)
Independent Studies in Art History
Supervised individual problems in selected art history research for students who have shown proficiency and marked degree of independence in other art history coursework. May be repeated. Prerequisite: consent of instructor.

ARTH 4950(1 - 3)
Special Topics in Art History
Innovative and intensive group studies in selected art historical research. Prerequisites announced for each offering. May be repeated. Prerequisite: junior or senior standing or consent of instructor.

Subject: Art Studio

ARTS 2110(3)
Drawing: The Figure
Fall, Spring. Introduction to the theory, practice, and history of drawing the human figure from life. Examination issues pertaining to larger cultural views of the body and seek to create individual meaning in the act of drawing the figure. Five studio hours. Prerequisite: ART 1030. Extra fee.

ARTS 2210(3)
Introduction to Painting
Fall, Spring. Introduction to the theory, practice and history of oil painting. Exploration of painting techniques from the traditional to modern are combined with lectures/demonstrations concerning the use of materials and the basics of color. Five studio hours. Prerequisite: ART 1030. Extra fee.

ARTS 2310(3)
Introduction to Printmaking
Fall, Spring. Introduction to the theory, practice and history of printmaking. Concentration on basic relief, intaglio, and monoprinting methods. Five studio hours. Prerequisites: ART 1020 and ART 1030. Extra fee.

ARTS 2410(3)
Introduction to Photography
Fall, Spring. Introduction to the theory, practice and history of black and white photography. Work with 35mm camera is combined with slide lectures and principles of optics, film, cameras, and darkroom techniques. Five studio hours. Prerequisite: ART 1020. Extra fee.

ARTS 2610(3)
Glass I
ARTS 2710(3)
Ceramics I
Fall, Spring. Introduction to basic building techniques including wheel throwing, coiling, and slab construction, as well as slip and glaze application and a variety of firing processes. Exposure to historical and contemporary references. Emphasis on personal growth through technique and concept. Five studio hours. Extra fee.

ARTS 2810(3)
Jewelry and Metals I
Fall, Spring. Foundation techniques and creative processes including design, fabrication, casting, and surface treatments. Five studio hours. Prerequisites: ART 1020 or ART 1030 or consent of instructor. Extra fee.

ARTS 2910(3)
Modeling and Moldmaking
Fall, Spring. Students will accurately render objects in clay, create an abstraction, and be introduced to plaster molds, castings, and simple armature construction. Five studio hours. Prerequisite: ART 1120. Extra fee.

ARTS 3000(1 - 3)
Special Topics 2-D
On demand. Innovative and intensive group study in selected studio research. Topic will vary with each offering. May be repeated. Prerequisite: BFA standing.

ARTS 3120(3)
Drawing: Landscape and Space
Fall, Spring. Introduction to the theory, practice, and history of drawing from the visual environment. Work from landscape and architectural motifs as a context for establishing a broad-based understanding of the variety of ways space is transformed into place. Five studio hours. Prerequisite: ARTS 2110. Extra fee.

ARTS 3130(3)
Drawing: Narrative and Sequence
Fall, Spring. Introduction to the theory, practice, and history of narrative and sequential art. Particular emphasis placed on developing an understanding of relationships between time and visual form. Five studio hours. Prerequisite: ARTS 2110. Extra fee.

ARTS 3220(3)
Painting: Waterbased Media
Fall, Spring. Introduction to the theory, practice, and history of waterbased painting, predominately acrylic, gouache and watercolor. Problem solving via traditional and mixed media approaches combined with lecture/demonstrations concerning technical knowledge and the expressive nature of the materials. Five studio hours. Prerequisite: ARTS 2210. Extra fee.

ARTS 3230(3)
Painting: The Figure
Fall, Spring. Introduction to the theory, practice, and history of the use of the figure in paintings. Emphasis on the ability to organize visual elements and the development of a more personal form of expression via direct observation. Five studio hours. Prerequisite: ARTS 2210. Extra fee.

ARTS 3240(3)
Painting: Contemporary Concepts and Techniques
Fall, Spring. Introduction to varied theories and practices in contemporary painting. Exploration of alternative and non-traditional approaches to painting as a means for self-expression. Five studio hours. Prerequisite: ARTS 2210. Extra fee.

ARTS 3320(3)
Printmaking: Relief and Monoprinting
Alternate semesters. Further exploration of the theory, practice, and history of relief printing using woodblock, linoleum, and found objects. Also includes an exploration of techniques for monoprints and monotypes. Five studio hours. Prerequisite: ARTS 2310. Extra fee.

ARTS 3330(3)
Printmaking: Etching
Alternate semesters. Further exploration of the theory, practice, and history of intaglio techniques to include drypoint, etching, aquatint, collagraph, photo processes, and experimentation with a variety of color inking methods. Five studio hours. Prerequisite: ARTS 2310. Extra fee.

ARTS 3340(3)
Printmaking: Lithography
Alternate semesters. Introduction to the theory, practice, and history of lithography. Techniques include: wet and dry media on stone and plate, and photo processes. Five studio hours. Prerequisite: ARTS 2310. Extra fee.

ARTS 3420(3)
Photography: Large Format
Fall, Spring. Further exploration of theory, practice and history of black and white images using the large format camera. Students will gain more in-depth technical knowledge and a deeper appreciation for the issues involved in the study of photography. The foundation for the students' personal vision will begin with this class. Five studio hours. Prerequisite: ARTS 2410. Extra fee.

ARTS 3430(3)
Photography: Color
Fall, Spring. Introduction to the theory, practice and history of color photography. Concentration on printing color negatives as well as the basics of color negative processing. Exploration of the use of color as a means of personal expression. Five studio hours. Prerequisite: ARTS 2410. Extra fee.
ARTS 3440(3)
Digital for Photographers
Fall, Spring. This course will familiarize students with the basic digital tools of scanning (input), manipulation (Photoshop), and printing (output) required to make digital photographic prints. Students will learn how these tools might be used in their ongoing development of a personal vision through self-directed and assigned projects. Students will gain technical understanding of topics such as color calibration and device profiling, file types and file management, and advanced color correction terms and techniques. Five studio hours. Prerequisites: ARTS 2410 and ARTS 3430.

ARTS 3620(3)
Glass II
Fall, Spring. Intermediate-level techniques of freehand blown glass formation. Introduction to glass composition and studio equipment technology. Studio equipment construction. Five studio hours. Prerequisite: ARTS 2610. Repeatable to six hours. Extra fee.

ARTS 3650(3)
Stained Glass I
Fall, Spring. Creative use of glass in two- and three-dimensional compositions using the traditional hand cut glass and copper foil techniques. Five studio hours. Prerequisite: ARTS 1020. Extra fee.

ARTS 3720(3)
Ceramics II
Fall, Spring. Focus on either hand building or throwing techniques. Exposure to historical and contemporary references in the medium as well as broader art concepts. Emphasis on technical proficiency and personal growth. Five studio hours. Prerequisite: ARTS 2710. Extra fee.

ARTS 3730(3)
Ceramics III
Fall, Spring. Exploration of advanced problems in either pottery or ceramic sculpture. Emphasis on contemporary ceramic issues. Development of personal expression with the material, using a higher level of craftsmanship. Will include documentation of work and beginning development of portfolio. Five studio hours. Prerequisite: ARTS 3720. Extra fee.

ARTS 3820(3)
Enameling on Metal
Fall, Spring. Creative applications of basic enameling techniques are explored for various applications on jewelry and related objects. Five studio hours. Prerequisite: ARTS 2810. Extra fee.

ARTS 3830(3)
Jewelry and Metals II
Fall, Spring. Creative and aesthetic applications of casting processes using silver, gold, and bronze in jewelry and related objects. Five studio hours. Prerequisite: ARTS 2810. Extra fee.

ARTS 3920(3)
Introduction to Carving
Fall, Spring. Introduction to the subtraction method using traditional techniques in soft stones such as marble, limestone and alabaster. Five studio hours. Prerequisite: ARTS 2910 or consent of instructor. Extra fee.

ARTS 3930(3)
Metal Casting
Fall, Spring. Introduction to metal casting in bronze, aluminum, and possibly iron, using the lost wax, ceramic shell, and bonded sand techniques. Five studio hours. Prerequisite: ARTS 2910. Repeatable to six hours. Extra fee.

ARTS 4000(1 - 3)
Special Topics 2-D
On demand. Innovative and intensive group study in selected studio research. Topic will vary with each offering. May be repeated. Prerequisite: BFA Art standing. Extra fee.

ARTS 4010(1 - 3)
Special Topics 3-D
On demand. Innovative and intensive group study in selected studio research. Topic will vary with each offering. May be repeated. Prerequisite: BFA Art standing. Extra fee.

ARTS 4070(3)
Art in Context
Spring only. Capstone course intended for students in BA Art degree. Also open to BFA Art students. Portfolio preparation together with a variety of research activities leading to understanding of studio art as a singular activity located within broader cultural contexts. Five studio hours.

ARTS 4090(1)
Professional Practices and Presentation
Fall. Issues facing the graduating senior in all BFA Art areas of study. Focus on specific skills required of artists such as resumes, artist statements, slide preparation, marketing and graduate school application. For BFA Art majors only. Extra fee.

ARTS 4140(3)
Advanced Drawing
Fall, Spring. Independent and group work in drawing informed by regular discussions, presentations and critiques. Five studio hours. Prerequisites: ARTS 3120 and ARTS 3130 or by permission of the instructor. Repeatable to six hours. Extra fee.

ARTS 4180(3)
Senior Studio in Drawing
Fall, Spring. For 2D majors with a specialization in drawing only. Supervised individual research as it applies to the final exhibition of drawings for the BFA Art degree. Five studio hours. Prerequisite: ARTS 4140. Repeatable to six hours. Extra fee.
ARTS 4240 (3)
Advanced Painting
Fall, Spring. This course will allow students to focus on personal style and content. Emphasis will be placed on individual research, the refinement of technical skills and the development of imagery. Five studio hours. Prerequisites: Two of the following: ARTS 3220, ARTS 3230, ARTS 3240 or by permission of the instructor. Repeatable to six hours. Extra fee.

ARTS 4280 (3)
Senior Studio in Painting
Fall, Spring. For 2-D majors with a specialization in painting only. Supervised individual research as it applies to the final exhibition of painting for the BFA Art degree. Five studio hours. Prerequisite: ARTS 4240. Repeatable to six hours. Extra fee.

ARTS 4350 (3)
Advanced Printmaking
Fall, Spring. Advanced study to include individual technical research, the development of personal imagery and the refinement of skills using one or more print media. Five studio hours. Prerequisites: Two of the following: ARTS 3320, ARTS 3330, ARTS 3340 or by permission of the instructor. Repeatable to six hours. Extra fee.

ARTS 4360 (3)
2D - Digital Hybrids
Fall, Spring. The course is intended to introduce ways to create works of arts by integrating the traditional 2D methods of painting, drawing, printmaking and photography with digital media. Emphasis will be placed on both creative and theoretical research through projects and critical readings. Five studio hours. Prerequisite: Junior standing or consent of instructor. Repeatable to 6 hours.

ARTS 4380 (3)
Senior Studio in Prints
Fall, Spring. For 2-D majors with a specialization in printmaking only. Supervised individual research as it applies to the final exhibition of prints for the BFA Art degree. Five studio hours. Prerequisite: ARTS 4350. Repeatable to six hours. Extra fee.

ARTS 4440 (3)
Advanced Photography
Fall, Spring. Will allow advanced students to focus on ideas in either black and white or color. Emphasis will be placed on individual research, the refinement of technical skills and the development of imagery. Five studio hours. Prerequisites: ARTS 3420 and ARTS 3430 or by permission of the instructor. Repeatable to six hours. Extra fee.

ARTS 4480 (3)
Senior Studio in Photography
Fall, Spring. For 2-D majors with a specialization in photography only. Supervised individual research as it applies to the final exhibition of photographic prints for the BFA Art degree. Five studio hours. Prerequisite: ARTS 4440. Repeatable to six hours. Extra fee.

ARTS 4630 (3)
Glass III
Fall, Spring. Advanced-level blown glass formation and cold glassworking techniques. Introduction to mold formed and cast glass processes. An emphasis is placed on interdisciplinary creative work. Studio equipment construction. Five studio hours. Prerequisite: ARTS 3620. Repeatable to six hours. Extra fee.

ARTS 4640 (3)
Glass IV
Fall, Spring. Creative use of multiple glass working processes developing an aesthetic direction. Focus on personal glass studio development and related technology. Five studio hours. Prerequisite: ARTS 4630. Extra fee.

ARTS 4680 (3)
Senior Studio in Glass
Fall, Spring. For 3-D major with a specialization in glass only. Supervised individual research as it applies to the final exhibition of glass works for the BFA Art degree. Five studio hours. Prerequisite: ARTS 4640. Repeatable to six hours. Extra fee.

ARTS 4740 (3)
Advanced Ceramics
Fall, Spring. Intended for students planning a career in the ceramics field. Sophisticated techniques of clay, glaze and firing methods. Emphasis on creation of a complex, well researched, aesthetically concise and technically successful body of work. Five studio hours. May be repeated to six hours. Prerequisite: ARTS 3730. Extra fee.

ARTS 4750 (3)
Glazes and Raw Materials
On demand. Introduction to theoretical and empirical approaches to understanding the behavior of glazes and raw materials. Analysis of glazes through application of the unity molecular formula as well as extensive individual glaze testing. Students are expected to demonstrate an understanding of glaze behavior in both theoretical and applied situations. Prerequisite: ARTS 2710. Extra fee.

ARTS 4760 (3)
Kiln Design
On demand. This course qualifies students to design, construct, and repair ceramic kilns. Emphasis is on real-world problem-solving strategies related to common kiln types. Students are expected to demonstrate both theoretical and practical knowledge of the concepts of kiln design and construction. Student will complete projects in kiln design, construction repair, and firing. Prerequisite: ARTS 2710 or permission of instructor. Extra fee.

ARTS 4780 (3)
Senior Studio in Ceramics
Fall, Spring. For 3D majors with a specialization in ceramics only. Supervised individual research as it applies to the final exhibition of ceramic works for the BFA Art degree. Five studio hours. Prerequisite:
ARTS 4740. Repeatable to six hours. Extra fee.

ARTS 4840(3)
Jewelry and Metals III
Fall, Spring. Advanced problems in forming and fabrication. Five studio hours. Prerequisite: ARTS 3830. Repeatable to six hours. Extra fee.

ARTS 4850(3)
Jewelry and Metals IV
Fall, Spring. Advanced refinement of technical and creative applications in jewelry design and metalsmithing. Five studio hours. Prerequisite: ARTS 4840. Repeatable to six hours. Extra fee.

ARTS 4880(3)
Senior Studio in Jewelry and Metals
Fall, Spring. For 3-D majors with a specialization in jewelry and metals only. Supervised individual research as it applies to the final exhibition of jewelry/metals works for the BFA Art degree. Five studio hours. Prerequisite: ARTS 4850. Repeatable to six hours. Extra fee.

ARTS 4890(1 - 3)
Studio Internship
Designed for students seeking to gain field experience under the guidance of a professional artist. Repeatable to six hours.

ARTS 4940(3)
Advanced Technical Carving
Fall, Spring. Exploration of a variety of technical problems related to stone, including anchoring, pinning, gluing, and joining of dissimilar materials. Five studio hours. Prerequisite: ARTS 3920 or consent of instructor. Repeatable to six hours. Extra fee.

ARTS 4950(3)
Advanced Sculptural Research
Fall, Spring. Advanced sculptural research and development of personal aesthetic direction and expression as it pertains to both the discipline and broad scope of contemporary sculpture. Five studio hours. Prerequisite: ARTS 3920 or ARTS 3930 or consent of instructor. Repeatable to six hours. Extra fee.

ARTS 4980(3)
Senior Studio in Sculpture
Fall, Spring. For 3-D major with a specialization in sculpture only. Supervised individual research as it applies to the final exhibition of sculptural works for the BFA Art degree. Five studio hours. Prerequisite: ARTS 4950. Extra fee.

Subject: Arts & Sciences

AS 1000(1 - 4)
Seminar in Arts and Sciences
Graded A/F. On demand. Interdisciplinary studies in arts and sciences or area of study meeting new trends in arts and sciences. May be repeated twice if topics differ. Prerequisite: consent of instructor.

AS 1010(1 - 4)
Seminar in Arts and Sciences
Graded S/U. On demand. Interdisciplinary studies in arts and sciences or area of study meeting new trends in arts and sciences. May be repeated twice if topics differ. Prerequisite: consent of instructor.

AS 1030(1)
AIMS (Academic Investment in Math and Science) Seminar I
Fall. Focuses on underclassmen who want to better define their curricular choices, means of developing mentor-student relationships, and to better define their career choice and career path. An integral part of AIMS Seminar I is that students must give a 3-minute presentation on "My Mentor and Me," which reflects some of their common and uncommon career strategies/interests. Presentations from faculty/staff and non-BGSU professionals from STEM (science/technology/engineering/math) areas are central to the course.

AS 1040(1)
AIMS (Academic Investment in Math and Science) Seminar II
Spring. Focuses on underclassmen who want to better develop means of navigating their career choices and paths, write professional resumes, and seek internships and/or undergraduate research opportunities. An integral part of AIMS Seminar II is that students must give an 8-minute presentation on "Navigating my career path," which should connect course work to short-, mid, and long-range career goals. Presentations from faculty/staff and non-BGSU professionals from STEM (science/technology/engineering/math) areas are central to the course.

AS 1100(3)
Arts BG
Fall, Spring. An introduction to arts events at BGSU, including concerts, theatre productions, film, and gallery showings. Emphasis on understanding and valuing artistic performances as a personal as well as community experience. Attendance at weekly scheduled events required. Applicable to the BG Perspective (general education) humanities and arts requirement.

AS 2000(1 - 5)
Seminar in Arts and Sciences
On demand. Interdisciplinary studies in arts and sciences or area of study meeting new trends in arts and sciences. May be repeated by consent of dean of the College of Arts and Sciences. Prerequisite: consent of instructor.

AS 2500(3)
Great Ideas
Fall, Spring. Interdisciplinary seminar on some of the motivating ideas of Western culture: Judeo-Christian heritage, Greek humanism, science, democracy, feminism, etc. Emphasis on reading of primary texts and class discussion. Prerequisite: GSW 1120. Applicable to the BG Perspective (general education) humanities and arts requirement.
AS 3000(1 - 5)
Seminar in Arts and Sciences
On demand. Interdisciplinary studies in arts and sciences or area of study meeting new trends in arts and sciences. May be repeated by consent of dean of the College of Arts and Sciences. Prerequisite: consent of instructor.

AS 3950(1 - 4)
Workshop on Current Topics in Arts and Sciences
On demand. Workshop on current topics and issues within arts and sciences. May be repeated if topics differ, upon approval of program adviser.

AS 4000(1 - 4)
Seminar in Arts and Sciences
On demand. Interdisciplinary studies in arts and sciences area of study focusing on new trends in arts and sciences. May be repeated by consent of dean of the College of Arts and Sciences. Prerequisite: consent of instructor.

AS 4600(1 - 15)
Arts Professional Credit Program
Fall, Spring, Summer. For students enrolled in the arts-professional curriculum who have completed 92 hours and are currently enrolled at a professional school. May be repeated up to 30 hours. Graded S/U only.

AS 4700(1 - 4)
Independent Study
On demand. Supervised individual study to meet student's need for special exploration in areas not covered by regular courses. Specific proposal and permission of adviser and College of Arts and Sciences required prior to enrollment. May be repeated to a maximum of six hours.

AS 4890(1 - 12)
Internship
On demand. Applied experience for students in arts and sciences programs. Specific proposal and permission of undergraduate adviser as well as College of Arts and Sciences required prior to enrollment. Maximum internship credit is 12 hours. Guidelines available in College of Arts and Sciences office. Graded S/U.

Subject: Asian Studies
ASIA 1800(3)
Asian Civilizations
Fall, Spring. This is a core course for all Asian Studies majors and minors. Provides general knowledge of Asia relative to historical, cultural, social, economic, and political developments of selected countries in East, South, or Southeast Asia. Credit allowed for only one of ASIA 1800, HIST 1800. Applicable to the BG Perspective (general education) social sciences and international perspective requirements.

ASIA 3000(3)
Peace and Cultural Legacies in the Nuclear Age
Spring. This is an interdisciplinary course on peace and cultural legacies in the nuclear age, with emphasis on how Asians and Americans have lived under the threat of nuclear war. It will examine the impact of nuclear bombings, their threats on peace, and the cultural history of the nuclear arms race and peace movements in the context of Asian and American philosophy, science, politics, art, literature, and education.

ASIA 3100(2)
Hiroshima and Beyond
Summer. This course will undertake an intensive field study in Hiroshima, Japan on the human and material consequences of the atomic bombings and the subsequent history of nuclear politics and culture. The students will witness the aftermath of a nuclear attack in a historical context and study the means of achieving world peace. No prerequisites, but students who have taken ASIA 3000 will be given priority to enrollment. Students must assume the expense of round trip airfare to Japan.

ASIA 4800(3)
Senior Project in Asian Studies
Fall, Spring. Capstone course for all Asian Studies majors. Meets a requirement for Asian Studies majors to develop specialized knowledge of an Asian country and its people by completing an individualized project with an Asian Studies faculty. Prerequisite: Asian Studies majors and minors, or the consent of the instructor.

ASIA 4890(3 - 12)
Internship
Fall, Spring. Designed to help Asian Studies majors and minors develop practical knowledge of an Asian country and its people. Students must complete a work and study project in Asia or at an Asia related organization elsewhere. Prerequisite: JAPN 1020 or CHIN 1020, or consent of instructor. May be repeated.

Subject: Astronomy
ASTR 2010(3)
Modern Astronomy
Fall, Spring, Summer. Introduction to the physical universe, including most or all of: motions in the sky, gravity, radiation, the Sun, the nature and evolution of stars, neutron stars and black holes, the Milky Way galaxy, galaxies, active galactic nuclei, the structure and evolution of the universe, and the search for extraterrestrial life. Some observational work. Applicable to the BG Perspective (general education) natural sciences requirement. Extra fee.

ASTR 2120(3)
The Solar System
Fall, Spring, Summer. Introduction to planetary and space science, including most or all of: motions in the sky, the history of astronomy, the moon, solar/terrestrial relations, planetary structure and atmospheres, comets, asteroids, meteoroids, space exploration, and the origin of the solar system. Some observational work. Applicable to the BG Perspective (general education) natural sciences requirement. Extra fee.

ASTR 2700(1 - 3)
Independent Study
On demand. Introduction to research in physics and astronomy; projects chosen in consultation with adviser. May include library and laboratory work. For lower division students only. Prerequisite: consent of
instructor. May be repeated.

**ASTR 3050 (3)**
**Life in the Universe**
Spring. The search for extraterrestrial life and life-friendly environments, including the origin, nature, and history of life on earth; possibilities for life in our own and other planetary systems, communicating with other intelligent life, and interstellar travel. Prerequisite: ASTR 2010. Applicable to the BG Perspective (general education) natural sciences requirement.

**ASTR 3070 (3)**
**Understanding the Cosmos**
Spring alternate years. The universe as a whole, as viewed by prehistoric civilizations to the present, including Greek/pre-Greek cosmology, the Copernican revolution, the development of modern cosmology, gravity, galaxies, dark matter, large-scale structure, universal expansion, the background radiation, the big bang and other models, the earliest times, dark energy, and the fate of the universe. Prerequisite: ASTR 2010. Applicable to the BG Perspective (general education) natural sciences requirement.

**ASTR 3090 (2)**
**Observational Astronomy**
Fall alternate years. Instrumentation and techniques used in making astronomical observations. Includes operation of an astronomical telescope, working knowledge of celestial coordinates, obtaining photographic images of astronomical objects and digital images with data reduction. One hour lecture and two hours laboratory. Open only to majors or minors in physics or astronomy. Prerequisite: ASTR 2010. Extra fee.

**ASTR 3210 (2)**
**Recent Progress in Astronomy**
Spring alternate years. Current topics in astronomy, which may include solar system exploration, extrasolar planets, pulsars, gravitational collapse and black holes, galaxies, large-scale structure in the universe, active galaxies and quasars, and cosmology. Prerequisites: PHYS 2020 or 2120; ASTR 2010. Not open to students with credit for PHYS 3210.

**ASTR 4030 (3)**
**Stellar Structure and Evolution**
Spring alternate years. Basic data, stellar interiors, theoretical models; advanced evolutionary states; red giants, white dwarfs, neutron stars, supernovas, black holes. Prerequisite: PHYS 3010 and consent of instructor. Not open to students with credit for PHYS 4030.

**ASTR 4700 (1 - 3)**
**Independent Study in Astronomy**
On demand. Introduction to research in astronomy; projects chosen in consultation with adviser, may include library and laboratory work. Prerequisite: consent of instructor. May be repeated.

**Subject: Athletic Training/Clinic Management**

**ATCM 2020 (3)**
**Athletic Training Clinic Management**
Fall, Spring. An introduction to athletic training/clinic management for athletic training majors. Emphasis will be on the clinical education components, Bowling Green athletic training staff, policies and procedures as used in the clinic/athletic training rooms.

**ATCM 2100 (3)**
**Care and Prevention of Sports Injuries**
Basic principles of prevention, recognition and care of sports injuries. Two one-hour lectures, one two-hour laboratory. Extra fee.

**ATCM 2120 (1)**
**Clinical Experience in Athletic Training 1**
Directed observation at athletic training clinical site assignments on the BGSU campus with supervision by an Approved Clinical Instructor (ACI) or other certified athletic trainer (ATC). Development and demonstration of entry-level clinical proficiencies associated with pre-admission coursework for the Athletic Training/Clinic Management (AT/CM) program. Corequisite: ATCM 2100.

**ATCM 3120 (3)**
**Therapeutic Athletic Training Modalities**
Examination of the application and physiological responses to selected therapeutic modalities available to the athletic trainer. Prerequisite: ATCM 2100. Corequisite: ATCM 3140.

**ATCM 3140 (1)**
**Clinical Experience in Athletic Training 2**
Directed observation at athletic training clinical site assignments on the BGSU campus with supervision by an Approved Clinical Instructor (ACI) or other certified athletic trainer (ATC). Development and demonstration of entry-level clinical proficiencies associated with pre-admission coursework for the Athletic Training/Clinic Management (AT/CM) program. Prerequisite: ATCM 2120. Corequisite: ATCM 3120.

**ATCM 3160 (3)**
**Therapeutic Athletic Exercise**
Essential components of a comprehensive rehabilitation program including goals and objectives, exercise selection, methods of evaluating and recording progress, and development of criteria for progression and return to competition. Prerequisite: ATCM 3120. Corequisite: ATCM 3180.

**ATCM 3180 (2)**
**Clinical Experience in Athletic Training 3**
Athletic training clinical experience rotations at clinical site assignments on the BGSU campus or at affiliated sites off-campus with direct supervision by an Approved Clinical Instructor (ACI) or other Clinical Instructor (CI). Development and demonstration of entry-level clinical proficiencies associated with coursework for the Athletic Training/Clinic Management (AT/CM) program. Prerequisite: ATCM 3140. Corequisite: ATCM 3160.

**ATCM 3910 (2)**
**Practicum in Athletic Training**
Field experience for athletic training majors only; weekly seminars. Prerequisite: SM 3870.

ATCM 4100(3)
Pathology & Evaluation of Athletic Injuries: Lower Extremity

ATCM 4120(2)
Clinical Experience in Athletic Training 4
Athletic training clinical experience rotations at clinical site assignments on the BGSU campus or at affiliated sites off-campus with direct supervision by an Approved Clinical Instructor (ACI) or other Clinical Instructor (CI). Development and demonstration of entry-level clinical proficiencies associated with coursework for the Athletic Training/Clinic Management (AT/CM) program. Prerequisite: ATCM 3180. Corequisite: ATCM 4100.

ATCM 4150(3)
Therapeutic Medications & Health Conditions
Medical conditions that athletes and other physically active people may experience in their performance; therapeutic medications, and other evaluation and treatment strategies appropriate to athletic training. Prerequisite: ATCM 3120.

ATCM 4170(3)
Pathology & Evaluation of Athletic Injuries: Upper Extremity
Normal physiological responses of the human body to trauma and inactivity. Physiological process of wound healing and tissue repair, and the relationship between typical symptoms and clinical signs and injury/illness pathologies. Commonly accepted techniques and procedures for clinical evaluation and recognition of the signs and symptoms of upper extremity athletic injuries. Prerequisite: ATCM 3120.

Subject: Business Administration
BA 1010(1 - 3)
Special Topics in Business Administration
Selected topics in business administration not covered in depth by existing courses. Offered in lecture or seminar format. Prerequisites if any depend upon course content. May be restricted to freshmen and/or sophomores. Repeatable if topics differ.

BA 1020(3)
Introduction to Business
Fall, Spring. Market competition and change, nature and central role of management, our business environment. No credit allowed toward BSBA degree. Credit not allowed for both BA 1020 and BA 1500.

BA 1500(3)
Overview of Business Administration
Introduction to functional areas and environments of business administration. Knowledge and skill development in accounting, finance, management and marketing. Overview of legal, economic, ethical and social/cultural aspects of business in domestic and global markets. Freshmen only; to be taken for letter grade; credit not allowed for both BA 1500 and BA 1020.

BA 2010(1 - 3)
Special Topics in Business Administration
Selected topics in business administration not covered in depth by existing courses. Offered in lecture or seminar format as a function of student demand or course content. Prerequisites if any depend upon course content. May be restricted to sophomores and/or juniors. Repeatable if topics differ.

BA 2030(3)
Business Communication
Fall, Spring, Summer. Principles of effective communication in writing business messages such as letters, memos, e-mail, and reports. Primary emphasis on written communication skills for use in business and public organizations with attention given to oral communication skills in business, such as small group and one-on-one communication. Prerequisite: GSW 1120. Extra fee.

BA 2040(3)
Introduction to Entrepreneurship
Introduction to entrepreneurship and its importance to the economy. Study of the entrepreneurial process from conception to birth of a new venture. Concentration on attributes of successful entrepreneurs including opportunity recognition, innovation, venture screening, risk assessment, risk tolerance, identification of resources, and business planning to learn how to turn opportunities into a viable business.

BA 3000(2)
Executive Seminar
Fall, Spring. Exposure to current issues in business administration via guest lecturers who are visiting executives-in-residence. Students have opportunity to examine a variety of career choices in business and current issues in business management. Graded S/U.

BA 3010(1 - 3)
Special Topics in Business Administration
Selected topics in business administration not covered in depth by existing courses. Offered in lecture or seminar format as a function of student demand or course content. Prerequisites if any depend upon course content. May be restricted to juniors and/or seniors. Repeatable if topics differ.

BA 3040(3)
Innovation and Creative Thinking
Recognizing and creating opportunities, innovation, and passion in pursuit of entrepreneurial ventures. Topics include challenges of fostering creativity, creative problem solving, taking risk, and organizing and managing innovation. Prerequisite: BA 2040.

BA 3050(3)
Ethics and Entrepreneurship
An examination of ethical issues related to the free enterprise system and entrepreneurship in particular. Business social responsibility, stakeholder theory, entrepreneurship and the good society, business philanthropy. Prerequisite: Junior standing.

BA 3100(3)
Introduction to Hospitality Management
Fall. First course in hospitality management curriculum. Scope, structure and economic principles of service management. Operations management considerations for hotels, restaurants and institutional food service. Uniform system of accounts and key operating ratios. Prerequisite: ACCT 2000 or ACCT 2210.

BA 3250(3)
Organisation and Structure of Health Care Services Industry
Fall. Broad dimensions and areas of health care services organizations, internal administrative processes; perspectives on comprehensive health planning and policy administration; environmental linkages to community health services agencies.

BA 3900(3)
Business in the Global Arena
Fall, Spring, Summer. Provide students with an understanding of the changing global business environment and its effects on managers, fostering the development of skills needed to assess opportunities and solve business problems in the global arena. Prerequisites: ECON 2000, or ECON 2020 and ECON 2030.

BA 3950(1 - 3)
Workshop on Current Topics in Business Administration
On demand. Selected topics in business administration. May be repeated if topics differ.

BA 3960(1 - 3)
Workshop on Current Topics in Business Administration
On demand. Selected topics in business administration. May be repeated if topics differ. No credit allowed toward BSBA degree.

BA 4010(1 - 3)
Special Topics in Business Administration
Selected topics in business administration not covered in depth by existing courses. Offered in lecture or seminar format as a function of student demand or course content. Prerequisites if any depend upon course content. May be restricted to juniors and/or seniors. Repeatable if topics differ.

BA 4040(3)
New Venture Creation
Business venture planning, initiation, and management. Mechanics of starting a business, including opportunity and industry analysis, and entry strategies. Preparation of a business plan. Identification of alternative business models. The course emphasizes entrepreneurship as a planned growth process. Prerequisites: C or better in each of BA 2040, FIN 3040, and MKT 3000 or MKT 3010.

BA 4050(3)
Business Policy and Strategy
Fall, Spring, Summer. Capstone course integrating functional areas of business. Strategic management planning process: decision making under uncertainty; external environment; internal strengths and weaknesses of the organization and its competitors; global competition; social responsibility; corporate culture; and values and ethics. Case analysis and simulations. Prerequisites: senior standing; credit for FIN 3000, MGMT 3000, MGMT 3600, MGT 3000 or MGT 3010 and OR 3800 and admission to the BSBA program. (May not be taken concurrently with any of the prerequisites.)

BA 4200(3)
Health Care Case Problems
Spring. Principles of management in the health care organization are explored in depth through the use of case studies. Students have the opportunity to develop a clear understanding of the differences between management in for-profit/non-profit health services organizations versus other organizational models. Emphasis is provided concerning reimbursement, the roles of various health professions and the changes currently taking place in health care management. Prerequisite: BA 3250.

BA 4290(3)
Health Care Internship
Fall, Spring, Summer. Internship in one of following areas of administration: hospital, nursing home, health maintenance organizations, third-party administration, and other health agencies. Prerequisites: BA 3250, two courses in the business administration component of the health care administration program and approval of adviser. Open only for students in the HCA specialization. Graded S/U.

BA 4390(3)
Regional Issues in International Business
Business issues in specific geographical regions of the world will be studied. The topics of trade, finance, management, marketing and technology will be explored from a regional perspective. May be repeated if topics differ. Prerequisite: BA 3900.

BA 4400(3)
Global Management
Focuses on advanced topics in global management from the firm perspective. Concepts studied include: environmental influences; social responsibility and ethics; cross-cultural negotiation and decision-making; global alliances and strategy implementation; building, motivating and leading global teams, and managing a global workforce. Prerequisites: MGMT 3600 or MGMT 3050 and C or better in BA 3900.

BA 4800(3)
Hospitality Management Seminar
Spring. Integration of previous coursework in business administration with hospitality management. Unit operating concerns, corporate policy and strategy. Prerequisites: admission to the BSBA program and 800 hours of approved practicum.

BA 4890(1 - 3)
Business Internship
No credit for students with other internship credit in the College of Business Administration. Program must be approved in advance by college internship director. Work experience must be completed within last year prior to graduation. Graded S/U.

**BA 4910(1 - 3)**
Studies in Business Administration
On demand. In-depth study of selected areas. Offered to individual student on lecture basis or in seminar depending on student needs and nature of material. May be repeated to six hours.

**BA 4920(1 - 3)**
Studies in International Business Administration
Study of subjects related to international business not otherwise offered in curriculum. Offered to individual student or in seminar depending on student needs and nature of material. May be repeated to six hours.

**BA 4950H(1 - 3)**
Reading for Honors in Business Administration
Fall, Spring, Summer. Supervised, independent program of reading and study. Prerequisites: 3.0 accumulative GPA and consent of department.

**Subject: Business Administration Technology**

**BAT 1000(2)**
Introduction to Real Estate
Foundation for further study and partial preparation for securing a salesperson's license. Contracts, financing, deed, title, escrow, closing estates, civil rights ethics, license law, leases, brokerage, total investment decision, appraisal fundamentals and commercial-investment properties.

**BAT 1010(2)**
Real Estate Law
Basic legal framework for subject of real estate. The legal system, estates in land, contracts for the sale of land, deeds, agency relationship, regulations covering brokers and salepersons, evidence of title, mortgages and other liens, civil rights, landlord-tenant, public control of land use, organized forms of multiple ownership, wills and estates.

**BAT 1020(3)**
Introduction to Business Technology
Business technical process including structure of business, functions of marketing, production, finance, personnel, technical processes of control, and responsibilities of business.

**BAT 2010(3)**
Human Resource Management
Basic concepts, principles and functions of management and personnel administration. Acquisition, development, utilization and maintenance of an effective work force; recruitment and selection, testing, interviewing, counseling, developing and compensating employees.

**BAT 2020(3)**
Production Management
Analyzing operations of the firm. Fundamentals of production, design of production systems, operations, coordination and control of production activity, major analytical tools for management. Three hours lecture. Prerequisite or corequisite: STAT 2000 or STAT 2110.

**BAT 2040(3)**
Marketing
Introduction of organization, management and practice of marketing by business firms.

**BAT 2050(3)**
Total Quality Leadership
Introduction to Managing for Quality, team building, graphical problem solving, how to use teams to improve quality and continuing improvement techniques that optimize just-in-time production methods.

**BAT 2070(3)**
Business Finance
Funds allocation and acquisition process of the firm, financial planning, capital budgeting, capital structure, long- and short-term financing.

**BAT 2080(3)**
Advertising
Design, layout, production and placement of advertising, historical and cultural precedents of modern advertising.

**BAT 2090(3)**
Management and Supervision
Principles of supervision and management techniques. Planning supervisory activities, motivating employees, delegation, leadership behavior, time management, managing performance, performance appraisal and management relations. Three hours lecture.

**BAT 2130(3)**
Real Estate Finance
Home mortgage investment by savings and commercial banks; channeling of money into mortgages, home mortgage lendings, special purpose mortgages and the administration of mortgage accounts.

**BAT 2150(2)**
Real Estate Appraisal
Three basic techniques of appraising market comparison, cost of replacement and income capitalization. The appraising process, understanding value, basic valuation principles, general market analysis, sites and improvement analysis, market data approach, income approach, and reconciliation and the final value estimate. Prerequisites: BAT 1000 and BAT 1010 or permission of instructor.

**BAT 2160(2)**
Real Estate Finance
Instruments of real estate finance such as mortgages, lien and title theories, leases and land contracts. Other topics including mortgage payment patterns, single family properties, mortgage market, major lenders, government and real estate, and special topics. Prerequisites: BAT 1000 and BAT 1020 or permission of instructor.

BAT 2170(2)
Real Estate Brokerage
Operation of a brokerage business. Includes the opportunity to expand knowledge of broker-client relationship, office management, selection of sales personnel, training salespersons, and a policy and procedure manual for the brokerage office. Prerequisites: BAT 1000 and BAT 1010 or permission of instructor.

BAT 2180(2)
Special Topics in Real Estate
A sample property case study is covered. Other subjects include single family housing design and construction, residential land development, condominiums and cooperatives, farm, rural, commercial and industrial real estate, federal taxation of real estate, and federal, state and local regulatory controls. Prerequisite: BAT 1000, BAT 1010, BAT 2150, BAT 2160 or permission of instructor.

BAT 2800(3)
Retail Management
Introduction to the principles and practices of retail management using a managerial approach. Topics emphasized include strategic planning, store operation, promotional strategy and computer applications.

BAT 2900(1 - 3)
Studies in Business
Business study projects, seminars and other forums in the fields of marketing, personnel, management, human relations, production, finance, computer science, law or economics. May be repeated up to six credits if topics vary. Prerequisites: sophomore standing and appropriate prior coursework.

BAT 2910(1 - 3)
Field Experience
Paid work activity in an appropriate business environment related to an occupational objective. One credit requires 180 hours of work. May be repeated up to 3 credits. Prerequisite: permission of site supervisor and adviser.

Subject: Bowling Green State University
BGSU 1000(3)
University Seminar
Fall. The seminar emphasizes skill development necessary for successful academic work with a specific focus on the University Learning Outcomes; introduces the use of project-based work to promote inquiry and engagement; develops electronic portfolios to demonstrate academic and personal growth; and builds networks with faculty, staff, and students. Applicable for BG Perspective (general education) credit.

Subject: Biology
BIOL 1010(3)
Environment of Life
Fall, Spring, Summer. Basic ecology and current environmental problems of air, water and land pollution; human reproduction and population dynamics. Two one-hour lectures and one two-hour laboratory. Not accepted toward biology major or minor. Not accepted toward more than one of ENVH 1050 and BIOL 1010. Applicable to the BG Perspective (general education) natural sciences requirement. Extra fee.

BIOL 1040(4)
Introduction to Biology
Fall, Spring, Summer. Basic concepts: the cell, metabolism, genetics, reproduction, development, evolution, ecology. Three one-hour lectures, one two-hour laboratory. Not accepted toward biology major or minor. Applicable to the BG Perspective (general education) natural sciences requirement. Extra fee.

BIOL 1050(5)
Concepts in Biology I
Fall, Spring, Summer on demand. Introduction to ecological and evolutionary biology, Mendelian and population genetics, and the major groups of plants, animals and microbes. Three one-hour lectures, one three-hour lab and one two-hour recitation. Field trips required. Applicable to the BG Perspective (general education) natural sciences requirement. Extra fee.

BIOL 2000(1)
Biology Today
Fall, Spring. Seminar on contemporary research, discoveries and controversies in biology, and detailed overviews of career paths and opportunities in the Biological Sciences. Required of first-year majors in Biological Sciences.

BIOL 2040(5)
Concepts in Biology II
Fall, Spring, Summer on demand. Introduction to ecological and evolutionary biology, Mendelian and population genetics, and the major groups of plants, animals and microbes. Three one-hour lectures, one three-hour lab and one two-hour recitation. Field trips required. Applicable to the BG Perspective (general education) natural sciences requirement. Extra fee.

BIOL 2050(5)
Concepts in Biology II
Fall, Spring, Summer on demand. Introduction to molecular and cellular biology, physiology and organ systems.
Three one-hour lectures, one three-hour lab and one one-hour recitation. Applicable to the BG Perspective (general education) natural sciences requirement. Extra fee.

**BIOL 3010**(3)
*Field Biology of the Vertebrates*
Fall. Evolution, systematics, physiology, ecology and identification of vertebrates. Required field trips emphasize collection techniques and quantitative sampling. Two one-hour lectures and one three-hour laboratory. May occasionally have early A.M. Labs. Prerequisite: BIOL 2040 or 2050. Extra fee.

**BIOL 3100**(3)
*Biology of Aging*
Spring. Biological aspects of normal aging at the cellular, tissue and organismal levels. Three one-hour lectures. Prerequisite: BIOL 1040 or BIOL 2050.

**BIOL 3130**(4)
*Microbiology*
Fall, Spring, Summer on demand. Methods of isolation, culture and identification; physiological, genetic and applied aspects of microorganisms. Two one-hour lectures, two two-hour laboratories. Prerequisites: BIOL 2050, and CHEM 1250 or CHEM 1350, or permission of instructor. Extra fee.

**BIOL 3140**(3)
*Microbiology for Health Professionals*
Fall, Spring, Summer. Microbiological and epidemiological principles as the basis of practice for nursing, dietetics, physical therapy, and other health professionals. Three one-hour lectures. No credit for microbiology or biology majors or minors.

**BIOL 3150**(1)
*Microbiology Laboratory for Health Professionals*
Fall, Spring. Methods for detection, growth and identification of microorganisms. One three-hour laboratory. No credit for microbiology or biology majors or minors. Prerequisite or corequisite: BIOL 3140. Extra fee.

**BIOL 3300**(3)
*Introduction to Behavioral Neuroscience*
Introduction to modern views of the brain; exploring the relationship between brain, behavior, and the mind. Prerequisites: PSYC 1010, BIOL 2050 or consent of the instructor. Credit not allowed for both PSYC 3300 and BIOL 3300.

**BIOL 3310**(4)
*Human Anatomy and Physiology I*
Fall, Spring, Summer. Anatomical and physiological aspects of cells and tissues and the integumentary, skeletal, muscular and nervous systems. Three one-hour lectures and one two-hour laboratory. Prerequisite: BIOL 1040 or BIOL 2050. Extra fee.

**BIOL 3320**(4)
*Human Anatomy and Physiology II*
Fall, Spring, Summer. Anatomical and physiological aspects of circulation, respiration, digestion, excretion, endocrinology and reproduction. Three one-hour lectures and one two-hour laboratory. Prerequisite: BIOL 1040 or BIOL 2050. Extra fee.

**BIOL 3340**(3)
*General Botany*
Spring. Structure, evolution, ecology and physiology of plants and their economic importance. Three hours of lecture and one two-hour lab. Prerequisite: BIOL 2040 or consent of instructor. Extra fee.

**BIOL 3350**(3)
*General Genetics*
Fall, Spring. Theoretical and applied aspects of inheritance. Molecular, chromosomal and population levels of heredity in both prokaryotes and eukaryotes. Three one-hour lectures and one one-hour recitation session. Prerequisites: BIOL 2040 and BIOL 2050 or consent of instructor.

**BIOL 33520**(1)
*Laboratory in Genetics*
Fall, Spring. Materials, methods and terminology of genetics through experiments, problems and demonstrations. One three-hour laboratory. Prerequisite or corequisite: BIOL 3350. Extra fee.

**BIOL 3540**(3)
*Population and Community Ecology*

**BIOL 3700**(3)
*Introduction to Inland Marine Research*
Fall. Theories and techniques for designing inland closed ecosystems for scientific research; basic concepts in marine ecology. Two hours of lecture/discussion and three hours of lab arranged. Prerequisites: BIOL 2040 and CHEM 1250. Extra fee.

**BIOL 3740**(3)
*Marine Biology*
Fall. Biological and oceanographic analysis of marine environments focusing on ecology, population dynamics, and biology of marine organisms. Three hours of lecture. Prerequisites: CHEM 1250.

**BIOL 4000**(1 - 5)
*Special Topics in Biology*
Fall, Spring, Summer. Selected topics or subject areas in life sciences. Prerequisite: consent of instructor; maximum of two enrollments, each with different topic but only six hours may be applied toward major in biology.

**BIOL 4010**(1 - 4)
*Introduction to Biological Research*
Fall, Spring, Summer. For advanced student who has shown proficiency and marked degree of independence in work. Individual registration. Prerequisite: four semesters of biology and consent of instructor. May be repeated once, but only four hours may be applied toward major in biology. Extra fee.

**BIOL 4020(3)**  
**Honors Thesis**  
Fall, Spring, Summer. For students in the departmental honors program only. The thesis describes the student's independent research, previously conducted as BIOL 4010H. An approved public presentation of the research is required.

**BIOL 4050(4)**  
**General Parasitology**  
Spring. Ecological, morphological, taxonomic and other biological aspects of parasites. Three one-hour lectures and one two-hour laboratory. Prerequisites: BIOL 2040 and BIOL 2050 or consent of instructor. Extra fee.

**BIOL 4060(3)**  
**Medical Entomology**  
Spring. Biology and identification of disease-carrying, toxic and parasitic arthropods. Two one-hour lectures and one two-hour laboratory. Prerequisites: BIOL 2040 and BIOL 2050 or consent of instructor. Extra fee.

**BIOL 4070(4)**  
**Cell Biology**  
Fall, Spring, Summer. Structure and physiology of cells, integrating the dynamics of cellular structures with metabolic functions and control. Two one-hour lectures and one four-hour laboratory. Prerequisites: two courses in Biology at or above 2000 level and CHEM 1280 or CHEM 1380 or consent of instructor. Extra fee.

**BIOL 4080(3)**  
**Molecular Biology**  
Fall. Function and structural relationship of genes and gene products, with emphasis on the applications of molecular biology to the diverse fields of biological research. Three one-hour lectures. Prerequisite: BIOL 3500 or permission of instructor; CHEM 3060 recommended.

**BIOL 4090(3)**  
**Conservation Biology**  
Fall. Biological diversity and factors responsible for the global extinction crisis. Focus on scientific principles of conservation, emphasis on applications of ecological theory and population genetics to the management of threatened populations, species and ecosystems. Prerequisites: BIOL 2040 and BIOL 3500. BIOL 3540 is recommended.

**BIOL 4100(3)**  
**Conservation Biology in Practice**  
Spring. The use of basic ecological principles as a basis for conservation of biological diversity. Focus on the underlying ecological concepts, current techniques utilized in the field, problem-solving approaches and the issues encountered when trying to conserve natural systems in a human-dominated landscape. Prerequisite: BIOL 2040; BIOL 3500, BIOL 3540, and BIOL 4090 recommended.

**BIOL 4110(4)**  
**Animal Physiology**  
Spring. General and comparative animal physiology with emphasis on vertebrate systems. Three one-hour lectures and one three-hour laboratory. Prerequisites: BIOL 2040 and BIOL 2050 or consent of instructor; organic chemistry and BIOL 4070 recommended. Extra fee.

**BIOL 4140(4)**  
**Plant Taxonomy and Evolution**  
Fall alternate odd years. Principles of plant classification, evolutionary relationships and processes of plant evolution. Construction and use of keys, identification of local flora, use of classical and molecular techniques in plant evolutionary studies. Three hours of lecture and one two-hour laboratory. Prerequisite: BIOL 2040 or consent of instructor. BIOL 3430 recommended. Extra fee.

**BIOL 4160(3)**  
**Landscape Ecology**  
Fall. Overview of the interaction between spatial pattern and ecological processes, especially the causes and consequences of spatial heterogeneity across a range of scales. Focus on the underlying ecological concepts, current techniques utilized in the field and problem-solving approaches. Prerequisites: BIOL 2040, BIOL 3540.

**BIOL 4170(4)**  
**Plant Molecular Biology**  
Spring. Molecular regulation of plant growth. Genetic engineering of plants. Use of transgenic plants as tools to understand the physiology, biochemistry and environmental regulation of plant metabolism. Three one-hour lectures, one two-hour laboratory and additional laboratory by arrangement. Prerequisites: BIOL 2040, BIOL 2050, BIOL 3500, and CHEM 3060 or CHEM 3410, or consent of instructor. Extra fee.

**BIOL 4180(3)**  
**Neurophysiology**  
Fall. The function of vertebrate and invertebrate nervous systems in relation to biophysical mechanisms. Changes occurring during development, learning, aging and neurological disorders. Three one-hour lectures. Prerequisites: BIOL 2040 and BIOL 2050 or consent of instructor. BIOL 4070 recommended.

**BIOL 4200(4)**  
**Animal Behavior**  
Fall. Mechanisms and evolution of animal behavior: including its neural, hormonal, and genetic substrates. Three one-hour lectures and one two-hour laboratory. Prerequisites: BIOL 2050 and either BIOL 2040 or PSYC 1010, or consent of instructor. Extra fee.

**BIOL 4210(3)**  
**Molecular Biotechnology**  
Spring. Overview of techniques of recombinant DNA that form the basic elements of biotechnology and its far-reaching applications in medicine and industry. Three hours of lecture. Prerequisites: BIOL 2040, BIOL 2050, BIOL 3500 required; BIOL 3130 recommended.
BIOL 4220(4)
Plant Ecology
Fall alternate even years. Physical and biological factors influencing the distribution and abundance of plant populations and communities. Three one-hour lectures and one three-hour laboratory. One weekend field trip required. Prerequisites: BIOL 2040 and BIOL 2050. Recommended: BIOL 3430, BIOL 3540 or BIOL 4510. Extra fee.

BIOL 4240(4)
Algology
Fall, alternate odd years. Taxonomy, ecology and morphology of the algae; emphasis on fresh-water algae. One two-hour lecture and two two-hour laboratories. Prerequisites: BIOL 2040 and BIOL 2050. Extra fee.

BIOL 4250(3)
Limnology
Fall. Physical, chemical and biological aspects of aquatic habitats. One two-hour lecture, one three-hour lab and one weekend field trip to upper Great Lakes. Prerequisites: BIOL 2040 and BIOL 2050. Extra fee.

BIOL 4260(3)
Pathogenic Microbiology
Fall. Genetic, biochemical, morphological, physiological, serological characteristics of pathogenic microorganisms; their epidemiology; and the host-parasite interrelations resulting in infectious disease. Three one-hour lectures. Prerequisite: BIOL 3130.

BIOL 4270(4)
Invertebrate Biology
Fall. Classification, structure, ecology and physiology of invertebrates. Three one-hour lectures and one two-hour laboratory. Prerequisite: BIOL 2040 or consent of instructor. Extra fee.

BIOL 4280(3)
Neuroethology
Spring. Mechanistic approaches to understanding the neural basis of animal behaviors at subcellular and systems levels in the context of life history, ecology and evolution. Prerequisite: BIOL 2040 or BIOL 2050; BIOL 3300 or PSYC 3300 strongly recommended.

BIOL 4310(3)
Developmental Biology
Fall. Overview of animal development (primarily embryogenesis) integrating classical morphological studies and current cellular and molecular findings. Three one-hour lectures. Prerequisites: BIOL 2040 and BIOL 2050 or consent of instructor.

BIOL 4310L(2)
Developmental Biology Laboratory
Fall. Physiological, metabolic actions of selected endocrine secretions with emphasis on mammals. Three one-hour lectures and one three-hour laboratory. Prerequisites: BIOL 3310/BIOL 3320 or BIOL 4110 and CHEM 3060 or CHEM 3410/CHM 3440. Biochemistry recommended. Extra fee.

BIOL 4350(4)
Entomology
Fall. Biology of insects: structure, physiology, ecology, systematics, evolution and importance to man. Two one-hour lectures and two two-hour laboratories or equivalent in field trips. Prerequisites: BIOL 2040 and BIOL 2050. Extra fee.

BIOL 4390(3)
Immunobiology
Fall. Study of the immune system. Analysis of the molecules, cells and processes involved in host defense against infection. Three one-hour lectures. Prerequisites: BIOL 2040 and BIOL 2050. BIOL 3500 and biochemistry recommended.

BIOL 4400(3)
Molecular Neurobiology
Spring. Cellular, molecular and developmental aspects of the nervous system and the molecular basis for the neural involvement in the functions of the mind. Three one-hour lectures. Prerequisite: four semesters of biology or consent of instructor.

BIOL 4410(3)
Chemical Ecology
Fall. The evolution and ecology of chemical signaling in the recognition of food, mates, hosts and pathogens. Three one-hour lectures. Prerequisites: organic chemistry, BIOL 2040 and BIOL 2050.

BIOL 4420(3)
Virus and Plasmid Biology
Spring. Virus and plasmid replication, control of copy number, compatibility, and relationships with the host. Characterization of viruses, plasmids and other mobile genetic elements with emphasis on infection and disease. Prerequisite: BIOL 3130 or consent of instructor.

BIOL 4430(3)
Microbial Physiology
Fall. Chemical composition, nutrition, growth, metabolism and regulation in microbial cells. Three hours of lecture. Prerequisites: BIOL 3130 and CHEM 3080 or consent of instructor.

BIOL 4440(2)
Microbial Physiology Laboratory
Spring. Growth, nutrition, biochemical, metabolic and regulatory activities of microorganisms. Prerequisite
BIOL 4450(3)
Environmental Microbiology
Spring alternate years. Microbial processes and mechanisms involved in biogeochemical cycles, biodegradation and bioremediation. Three one-hour lectures. Prerequisite: BIOL 3130 or permission of instructor.

BIOL 4460(4)
Scanning Electron Microscopy
Spring. Theory of scanning electron microscopy; application to structure/composition of living/inert matter. Sample preparation, backscattered electron detection, energy-dispersive x-ray microanalysis. Two one-hour lectures; two three-hour labs. Prerequisites: two courses in Physics and CHEM 1280 or CHEM 1380 or permission of instructor. Extra fee.

BIOL 4470(3)
Microbial Genetics
Spring. Molecular biology and genetic phenomena of bacteria and bacteriophage; mutagenesis and recombination. Three one-hour lectures. Prerequisites: four semesters of biology and consent of instructor. BIOL 3500 and biochemistry recommended.

BIOL 4490(3)
Epidemiology
Spring. Distribution and determinants of health and diseases in humans. Methods of studying those factors that influence change in the determinants of disease. Three one-hour lectures. Prerequisites: junior standing and completion of BIOL 2040 and BIOL 2050 or consent of instructor. Credit allowed for no more than one: BIOL 4490 and ENVH 4490.

BIOL 4500(3)
Teaching Evolution and the Nature of Science
Spring, Summer. Course designed to increase understanding of evolution and the nature of science, with extensive content-rich materials, interactive exercises, primary source readings and in-depth exploration of scientific concepts. Guided by the National Science Education Standards; includes practical experience in teaching evolution and the nature of science. Does not fulfill the Biology group 2 requirement for majors. Offered on-line only. Prerequisites: BIOL 1040 or BIOL 2050 or equivalent or consent of instructor.

BIOL 4510(3)
Evolution
Spring. Evidence for evolution. Modern evolutionary theory; modes of selection, speciation, complex adaptations, micro-evolutionary trends. Three one-hour lectures. Prerequisite: BIOL 3500.

BIOL 4520(1 - 3)
Aquarium Husbandry
Fall, Summer, Spring. A Service Learning Course. Hands-on experience with aquatic organisms including basic husbandry and breeding. May include research aimed at optimizing captive husbandry, coral propagation, or experimental filtration systems. May be taken more than once, but only three hours may be applied toward a major in biology. Three hours in lab per week for each credit hour earned. Prerequisite: BIOL 3700 or consent of instructor.

BIOL 4530(1 - 3)
Amphibian and Reptile Husbandry
Fall, Summer, Spring. A Service Learning Course. Hands-on experience with reptiles and amphibians including basic husbandry and breeding. May include research aimed at optimizing captive husbandry. May be taken more than once, but only three credit hours may be applied toward a major in biology. Three hours in lab per week for each credit hour earned. Prerequisite: consent of instructor.

BIOL 4540(1)
Biology Lab Tour
Fall, Summer, Spring. A Service Learning Course. Students will gain experience as an educator in a public biological setting by conducting lessons and presenting organisms in the various life science labs. May be taken more than once, but only three hours may be applied toward a major in biological sciences. Prerequisite: BIOL 3700, or BIOL 3430, or BIOL 4460, or BIOL 4760, or consent of instructor.

BIOL 4620(3)
Principles of Biometry
Fall. An introduction to experimental techniques and the analysis of data in studies of animal behavior, ecology and other selected areas of biology, with a focus on scientific methodology and topical problems in these areas. Two one and one-half hour lectures. Prerequisites: BIOL 2040 or BIOL 2050 and a grade of C or higher in MATH 1310 or MATH 1350 or consent of instructor.

BIOL 4700(1)
Readings in Biological Sciences
Fall, Spring, Summer. Independent readings on topics of current or specialized interest in biology. Not more than two hours may be applied to major or minor requirements. Prerequisite: consent of instructor. May be taken S/U for major credit.

BIOL 4710(3)
Sensory Ecology
Fall. How the physical laws of nature and properties of the nervous system shape the way in which animals perceive and respond to sensory information in different terrestrial and aquatic environments. Students will integrate and apply concepts in sensory ecology to internationally important issues in conservation biology. This interdisciplinary course is intended for students in Biology, Psychology, Neuroscience, Environmental Science or Physics.

BIOL 4720(3)
Ichthyology
Fall alternate years. Life histories, systematics, physiology, ecology, evolution and biogeography of major groups of freshwater and marine fishes. Two one-hour lectures and one three-hour laboratory. Saturday and/or weekend field trips required. Prerequisites: BIOL 2040 and BIOL 2050. Extra fee.
Mammalogy
Fall alternate years. Identification, natural history, evolution, zoogeography, ecology, physiology, behavior, with emphasis on Ohio mammals. Two one-hour lectures and one three-hour laboratory; one weekend field trip and additional field work required. Prerequisites: BIOL 2040 and BIOL 2050 or equivalent. Extra fee.

BIOL 4750(1)
Marine Biology Field Trip
Spring alternate years. Field trip to a marine environment or research station to study different marine habitats. Trips and tours of laboratory facilities, aquariums and research vessels. Course involves intensive fieldwork. Prerequisite: BIOL 3740 (may be taken concurrently). Extra fee.

BIOL 4760(3)
Herpetology
Spring. Amphibian and reptile identification, habits, distribution, behavior. Two one-hour lectures and one three-hour laboratory or equivalent field work, all-day field trip. Prerequisites: BIOL 2040 and BIOL 2050. Extra fee.

BIOL 4770(3)
Ornithology
Spring. Structure, physiology, behavior, ecology and evolution of birds; identification in field and laboratory. Two one-hour lectures and one three-hour laboratory or equivalent field work, all-day or weekend field trip. Prerequisite: seven hours of biology. Extra fee.

BIOL 4870(1 - 6)
Special Problems in Marine Science
Summer. Supervised research on specific problems in all areas of marine science. Prerequisites and credits to be set by problem director and registrar at Gulf Coast Research Laboratory. May be repeated up to 6 hours.

BIOL 4880(1 - 6)
Topics in Marine Science
Summer. Various marine courses such as oceanography, marine biology, marine ecology, marine mammals, marine invertebrate zoology and others offered when taught by staff at the Gulf Coast Research Laboratory. May be repeated for different titled topics as approved by the departmental Marine Program Coordinator or Director.

BIOL 4890(1 - 3)
Biology Internship
Fall, Spring, Summer. For biological sciences majors in cooperative education program. Written report required. May be repeated with permission. Only three hours can apply toward biology major or minor. Prerequisite: consent of the departmental adviser. Graded S/U.

BUSE 1010(3)
Business Mathematics
Fall, Spring. Mathematics of finance, merchandising and business ownership. Consumer application of business mathematics to banking, credit, interest, insurance, home ownership, wages, social security and income taxes. Introduction to the basic accounting cycle.

BUSE 1100(1)
Introduction to Business and Marketing Education
Introduction to teaching and learning through business education and marketing education in public and private schools, post-secondary institutions, and private business and industry. C/F hours: 30. Transportation required.

BUSE 1190(2)
Advanced Keyboarding
Emphasis on keyboarding speed and accuracy and production of office documents. Prerequisite: one semester of high school keyboarding or BUSE 1100 and BUSE 2610 or equivalent.

BUSE 2000(2)
Introduction to Business and Marketing Education
Introduction to word processing terminology and fundamental applications such as creating, editing, saving, and printing business documents. Extra fee.

BUSE 2400(3)
Business Problems of the Consumer
Fall, Spring. Relationship of business practices to consumer activities. Developing consumer competencies in insurance, credit, savings, investments, housing and estate planning. Basic economic principles underlying consumer decision making. C/F hours: 10. Transportation required.
BUSE 2640(1)
Introduction to Spreadsheet Applications
Fall, Spring. Introduction to spreadsheet terminology and fundamental applications such as planning, building formulas and functions, formatting, and printing worksheets on PC systems. Emphasis on using spreadsheets in the decision-making process. Prerequisite: BUSI 1100 or one semester of high school keyboarding or equivalent. No credit allowed toward BSBA degree. Extra fee.

BUSE 2650(1)
Intermediate Spreadsheet Applications
Fall, Spring. Intermediate spreadsheet management applications. Topics such as graphs, database management, macros, vertical lookup and data tables, and financial functions. Emphasis on using spreadsheets in the decision-making process. Prerequisite: BUSE 2640 or CS 1000 or MIS 2000 or equivalent. Extra fee.

BUSE 2660(1)
Advanced Spreadsheet Applications
On demand. Advanced spreadsheet techniques such as creating templates and working with multiple worksheets and workbooks, using data analysis tools, developing customized applications with macros and Visual Basic, and using web capabilities. Emphasis on using spreadsheets in decision-making process. Prerequisite: BUSE 2650 or its equivalent.

BUSE 2680(1)
Introduction to Database Applications
Fall, Spring. Introduction to database terminology and fundamental applications such as creating database structures, appending, editing, deleting, and manipulating records to generate business reports on PC systems. Prerequisite: BUSI 1100 or one semester of high school keyboarding or equivalent. No credit allowed toward BSBA degree. Extra fee.

BUSE 2690(1)
Intermediate Database Applications
Fall, Spring. Intermediate database functions such as generating reports and building relationships between databases. Also included are data and records management functions. Prerequisite: BUSE 2680 or CS 1000 or MIS 2000 or equivalent. Extra fee.

BUSE 2700(1)
Advanced Database Applications
On demand. Advanced application techniques such as customizing forms and reports, creating macros and modules, integrating with other software applications, and using web capabilities. Prerequisite: BUSE 2690 or its equivalent.

BUSE 2720(1)
Introduction to Presentation Software Applications
Fall, Spring. Presentation and photographic image-editing software applications.

BUSE 2760(1)
Desktop Publishing Applications
Fall, Spring. Introduction to desktop publishing with emphasis on creating brochures, booklets, pamphlets, advertising flyers and other office publications.

BUSE 2780(1)
Introduction to Web Software Applications
Fall, Spring. Introductory application techniques such as developing a web site and creating, formatting, testing, and revising a web page using Web software.

BUSE 3140(1 - 3)
Internship in Business Education
Fall, Spring, Summer. Supervised experience in business offices. 100 clock hours of work required for each hour of college credit. Interviewing and written paper also required. May be repeated up to three hours. Graded S/U. Transportation required.

BUSE 3150(1 - 3)
Internship in Marketing Education
Fall, Spring, Summer. Supervised experience in marketing-related businesses. 100 clock hours of work required for each hour of college credit. Interviewing and written paper also required. May be repeated up to three hours. Graded S/U. Transportation required.

BUSE 3160(1 - 4)
Internship in Business Education and Marketing Education
Fall, Spring, Summer. Supervised business office and marketing experience. 100 clock hours of work required for each hour of college credit. Written paper also required. May be repeated up to four hours. Graded S/U. Transportation required.

BUSE 3330(1)
Business Records Management
Fall, Spring. Principles and practices of reliable and systematic control of information and business records. No credit for both BUSE 3330 and BUSE 3350.

BUSE 4000(2)
Basic Business in Secondary Schools
Spring. Course of study development, unit and lesson planning, and teaching basic business subjects. Prerequisite: BUSE 2000. C/P hrs: 32. Transportation required.

BUSE 4280(3)
Interrelatedness of Business and Technology in Business Education
Fall. Integration of business and computer technology-related concepts; advanced and emerging technologies taught by business technology educators.

BUSE 4510(2)
Career Development
Fall. Factors associated with career development. Self-exploration and management; career opportunities, assessment and resources; work ethics and expectations; and job search. Prerequisite: BUSE 2000.
BUSE 4630(2)
Teaching and Learning Strategies for Adults
Spring. Identification of adult needs; curriculum, instruction and assessment for adults; instructional programs for adults. Prerequisites: BUSE 2000 and junior standing. C/F hours: 8. Transportation required.

BUSE 4640(2)
Teaching and Learning in Marketing Education
Fall. The teaching and learning process as it relates to marketing education. Prerequisites: BUS 2000, BUS 4000, EDFI 3030, MKT 3000. Minimum overall GPA of 2.4 required to enroll. Take concurrently with EDFI 4020 and BUS 4770. C/F hours: 10. Transportation required.

BUSE 4650(2)
Development and Trends in Workforce Education
Fall. Workforce education as sponsored by federal, state and local legislation; new and emerging trends and initiatives such as national and state workforce education strategic plans, career academies, tech prep and career pathways. Prerequisites: BUS 2000, BUS 4000. Take concurrently with BUS 4640 and/or BUS 4670, BUS 4770.

BUSE 4660(4)
Teaching and Learning in Business Education
Fall. The teaching and learning process as it relates to business education including curriculum, instruction, integration of academic and business education, assessment, and student organizations. Prerequisites: BUS 2000, BUS 2620, BUS 2720, BUS 2760, BUS 2780, BUS 4000, EDFI 3030, ACCT 2100, MKT 3000, MGMT 3050, and MIS 2000 or CS 1000. Minimum overall GPA of 2.4 required to enroll. Take concurrently with EDFI 4020 and BUS 4770. C/F hours: 10. Transportation required.

BUSE 4670(2)
Work-based Teaching and Learning
Fall. Managing and facilitating the teaching and learning process using work-based instructional and assessment strategies and connecting them to school-based instruction. Prerequisites: BUS 2000, BUS 4000. Take concurrently with BUS 4640 and/or BUS 4670, BUS 4770. C/F hours: 8. Transportation required.

BUSE 4700(1 - 15)
Studies in Business and Marketing Education
On demand. Offered on individual, seminar or lecture basis. Treatment of selected areas in depth depending on student needs and nature of material. May be repeated up to fifteen hours. Prerequisite: consent of instructor. Graded S/U.

BUSE 4770(1 - 4)
Business and Marketing Education Practicum
Fall. Field experience in local schools to familiarize students with Business and/or Marketing Education teaching responsibilities, including planning, instruction, assessment, and classroom management, as well as school administration and policies, teacher duties, and student organizations. Take concurrently with BUS 4640 and/or BUS 4670, BUS 4770. C/F hours: 10. Transportation required.

CAST 2010(3)
Introduction to Canadian Studies
Fall, Spring, Summer on demand. Multidisciplinary review of Canadian development. Comparisons with the United States. Canada's history, geography, government and political system, population and social policy, economy and foreign trade, literature, art, and popular culture. Applicable to the Bg Perspective (general education) social sciences and international perspective requirements. Extra fee.

CAST 3050(3)
Canadian Film
Fall and/or Spring. Canadian feature films from 1939 to the present seeks to determine a Canadian national identity, taking into consideration English and French Canadian social, political and cultural issues. The course explores Canadian film styles in relation to American and European models. Extra fee.

CAST 4000(1 - 4)
Seminar in Canadian Studies
On demand. Various topics relating to the study of Canada. May be repeated up to 8 hours if topics differ. Prerequisite: consent of instructor.

CAT 1910(3)
Principles of Communication Arts Technology
History and application of communication arts technology; emphasis on interdisciplinary nature of CAT. Defining CATs, networks and telephony, design issues in multimedia development, practical application in business, government, industry. General emphasis on written work and thinking skills. Prerequisite/corequisite: GSW 1120 or permission of instructor.

CAT 2100(1)
Computer Presentation Tools and Methods
Planning and implementing effective computer-based presentations for the business environment. Keyboarding
skills and a basic knowledge of Windows environment required.

**CAT 2200(1)**

**Multimedia Literacy**

Multimedia basics, including concept design, planning, content generation, graphics, audio, delivery formats, and systems development. Keyboarding skills and basic knowledge of Windows environment required.

**CAT 2510(3)**

**Voice and Video Systems**

Technical overview of voice and video systems. Technical introduction to telephones, telephony and telecommunication systems, local and long distance technologies, computer telephony integration, video standards and delivery systems, applications in business and industry. Prerequisite: CAT 1910.

**CAT 2900(1 - 3)**

**Studies in Communication Arts Technology**

Workshops and seminars dealing with current topics and software technologies not covered in existing courses. May be repeated to 6 credit hours if topics differ.

**CAT 2910(3)**

**Communication Arts Technology Integrative Seminar**

Capstone experience for associate degree in CAT. Directed field research; emphasis on occupational exploration and relations between field experience and coursework. Prerequisite: CAT major.

**Subject: Communication Disorders**

**CDIS 1230(3)**

**Introduction to Communication Disorders**

Fall, Spring, Summer, and web-based during summer only. Normal speech and language development; description and etiology of various communication disorders including phonology, voice, stuttering, language and hearing. Applicable to the BS Perspective (general education) social sciences requirement.

**CDIS 2240(3)**

**Phonetics**

Fall, Spring. Sounds of spoken English, their production and recognition. Applications to techniques in speech pathology and habilitations of the hearing handicapped. Prerequisite: CDIS pre-major or consent of department chair.

**CDIS 2250(3)**

**Speech and Language Acquisition and Development**

Fall, Spring, Summer. Speech and language acquisition theories, developmental processes, and characteristics of phonology, morphology, syntax, semantics, and pragmatics in individuals throughout the lifespan. Prerequisite: CDIS pre-major, Deaf/Hard of Hearing Intervention Specialist or consent of department chair.

**CDIS 3010(4)**

**Anatomy and Physiology of the Speech Mechanism**

Fall, Spring. Anatomical and physiological principles of the speech mechanism, including central and peripheral nervous systems. Three one-hour lectures and one two-hour laboratory. Prerequisites: CDIS major or permission of department chair. Extra fee.

**CDIS 3020(4)**

**Acoustics for Speech and Hearing**

Fall. The nature of sound waves, simple harmonic motion, complex waves, sound transmission, and the acoustics of speech. Three one-hour lectures and one two-hour laboratory. Prerequisites: CDIS major or permission of department chair.

**CDIS 3110(3)**

**Phonological Assessment and Intervention**

Fall, Spring. Introduction to developmental disorders of speech sound production. Linguistic and motoric aspects of normal and disordered phonological development, and clinical management thereof. Prerequisite: CDIS 2250; Pre- or Corequisite: CDIS 3010; CDIS major or permission of department chair.

**CDIS 3510(4)**

**Language Assessment and Intervention**

Fall. Overview of language disorders; principles and techniques of language evaluation and treatment. Three one-hour lectures and one two-hour laboratory. Prerequisites: CDIS 2250; CDIS major or permission of department chair. Extra fee.

**CDIS 3610(3)**

**Diagnostic Audiology**

Spring. Anatomy and physiology of the auditory mechanism; audiometric pure-tone and speech testing; electrophysiological measures; otologic pathologies and associated hearing problems. Prerequisites: CDIS 3020; CDIS major or permission of department chair.

**CDIS 4010(4)**

**Clinical Methods in Communication Disorders**

Fall, Spring. Introduction to clinical process; principles of speech-language therapy; guided observation of intervention and assessment. Three lectures and a one-hour observation period per week. Prerequisites: CDIS 3110, CDIS 3510; CDIS major or consent of department chair.

**CDIS 4210(1 - 3)**

**Practicum in Communication Disorders**

Supervised clinical experiences with children and/or adults. Prerequisites: CDIS 4010, CDIS major, overall GPA of 3.0 or above, GPA in major of 3.2, nothing less than C in major courses, minimum observation hours required by ASHA, and consent of appropriate department faculty. Student liability insurance required. Extra fee.

**CDIS 4610(3)**

**Fundamentals of Audiologic Rehabilitation**

Fall. Methods of assessment and treatment of hearing disorders in children and adults. Individual and group amplification systems; speech and language characteristics of the hearing-impaired; speechreading and
CDIS 4710(3)
Introduction to Communication Disorders for the Classroom Teacher
Fall, Spring, Summer. Identification, etiologies and characteristics of communication disorders. Suggestions for classroom management of communication disorders. Not open to student with credit for CDIS 1230.

CDIS 4760(2)
Introduction to Research in Speech, Language and Hearing
On Demand. Basic research methods for planning research, as well as data collection, analysis, and interpretation of research within Communication Disorders. Preparation for reading research as well as participating in research. Mentored research experience included. One hour lecture; one hour research. Prerequisites: Pre-CDIS or CDIS Major or consent of instructor.

CDIS 4800(1 - 4)
General Seminar
Fall, Spring. Variable topic seminar. Specific content areas offered depends on demand and interest of faculty. May be taken four times (up to 16 credit hours). Prerequisites: junior standing (60 semester hours); permission of instructor and department chair.

CDIS 4900(1 - 3)
Independent Study in Communication Disorders
Fall, Spring, Summer. For students who wish to do intensive study in communication disorders independently or in conjunction with courses regularly offered. May be repeated. Prerequisite: consent of instructor and department chair.

Subject: Technical Certification
CERT 2100(18)
Paramedic National Registration-Didactic
Credit by exam requiring student to be currently certified to practice as a paramedic and successful completion of the written portion of the national exam for paramedics. By permission of department. Graded S/U. Credit by exam fee applies.

CERT 2110(7)
Paramedic National Registration-Lab and Clinical
Credit by exam requiring student to be currently certified to practice as a paramedic and successful completion of the practical exam portion of the national registry exam for paramedics. By permission of department. Graded S/U. Credit-by-exam fee applies.

CERT 2200(20)
Radiologic Technologist National Registration (American Registry of Radiologic Technologists)-Didact
Credit by exam requires current registration by the American Registry of Radiologic Technologists (A.R.R.T.) and issuance of a Radiologic license by the Ohio Department of Health, Radiologic Technology Section, to practice in Ohio. Graded S/U. Credit by exam fee applies.

CERT 2210(10)
Radiologic Technologist National Registration (American Registry of Radiologic Technologists)-Lab/Cl
Credit by exam requires current registration by the American Registry of Radiologic Technologists (A.R.R.T.) and issuance of a Radiologic license by the Ohio Department of Health, Radiologic Technology Section, to practice in Ohio. Graded S/U. Credit by exam fee applies.

Subject: Chemistry
CHEM 1000(3)
Introduction to Chemistry
Fall, Spring, Summer. Examination of basic chemical concepts and role of chemistry in modern society. For students not majoring in sciences. Not counted toward chemistry major or minor. Applicable to the BG Perspective (general education) natural sciences requirement.

CHEM 1090(3)
Elementary Chemistry
Fall, Spring, Summer. General chemistry and introduction to organic chemistry. Not accepted toward chemistry major or minor. Three lectures. Corequisite: CHEM 1100. Prerequisites: two years of high school science and high school algebra or its equivalent. Applicable to the BG Perspective (general education) natural sciences requirement.

CHEM 1100(1)
Elementary Chemistry Laboratory
Fall, Spring, Summer. Exploration of fundamental chemical principles and their application to the solution of environmental, health, and economic problems. Not accepted toward chemistry major or minor. Corequisite: CHEM 1090. Applicable to the BG Perspective (general education) natural sciences requirement. Extra fee.

CHEM 1170(4)
Elementary Organic Chemistry and Biochemistry
Fall, Spring. Not accepted toward chemistry major or minor. Survey of principles of organic and biochemistry, with medical applications. Prerequisites: CHEM 1090 or CHEM 1250, proficiency examination or consent of instructor. Applicable to the BG Perspective (general education) natural sciences requirement.

CHEM 1250(5)
General Chemistry
Fall, Spring, Summer. Chemistry sequence for students majoring in sciences, the liberal arts or in premedical programs. Three lectures, one recitation, one three-hour laboratory. Prerequisites: high school chemistry, algebra and geometry, or CHEM 1090 and CHEM 1100. Applicable to the BG Perspective (general education) natural sciences requirement. Extra fee.

CHEM 1270(3)
General Chemistry
Fall, Spring, Summer. Three lectures, one recitation. CHEM 1250 continued. Prerequisite: C or better in CHEM 1250 or CHEM 1350. Corequisite: CHEM 1280. Applicable to the BG Perspective (general education) natural sciences requirement.
CHEM 1280(1)
General Chemistry Laboratory
Fall, Spring, Summer. One three-hour laboratory. Includes some qualitative analysis. Prerequisite: C or better in CHEM 1250 or CHEM 1350. Corequisite: CHEM 1270. Applicable to the BG Perspective (general education) natural sciences requirement. Extra fee.

CHEM 1350(5)
General Chemistry
Fall. General chemistry sequence for well-prepared students. Three lectures, one recitation, one three-hour laboratory. Prerequisites: high school chemistry or CHEM 1090 and CHEM 1100. Corequisite: MATH 1300 or MATH 1310. Applicable to the BG Perspective (general education) natural sciences requirement.

CHEM 1370(4)
General Chemistry
Spring. CHEM 1350 continued. Four lectures. Prerequisites: C or better in CHEM 1350, or B or better in CHEM 1250 and consent of instructor. Corequisite: CHEM 1380. Applicable to the BG Perspective (general education) natural sciences requirement.

CHEM 1380(1)
General Chemistry Laboratory
Spring. One three-hour laboratory. Emphasis on quantitative procedures. Prerequisite: C or better in CHEM 1250 or CHEM 1350. Corequisite: CHEM 1370. Applicable to the BG Perspective (general education) natural sciences requirement.

CHEM 1770(3)
Introduction to Forensic Science
Fall. General chemistry for well-prepared students. Three lectures, one recitation, one three-hour laboratory. Prerequisites: high school chemistry or CHEM 1090 and CHEM 1100. Corequisite: MATH 1300 or MATH 1310. Applicable to the BG Perspective (general education) natural sciences requirement.

CHEM 1990(1)
Introduction to Elementary Organic Chemistry
Fall, Spring. A survey of the field of forensic science—the application of science to the law. Topics include the identification, proper collection, storage, documentation, and analysis of evidence through microscopy, wet chemistry, spectroscopic methods, toxicology, serology, DNA typing and fingerprinting. No prerequisites. Not accepted toward chemistry major or minor. Applicable to the BG Perspective (general education) natural sciences requirement.

CHEM 2010(3)
Quantitative Chemical Analysis
Fall. Theory and practice of quantitative analysis: volumetric, spectrophotometric and electrochemical methods. Two lectures, one three-hour laboratory. Prerequisite: C or better in CHEM 1270 and CHEM 1280. Extra fee.

CHEM 3060(3)
Basic Biochemistry
Spring, Summer. Three lectures. A survey course of biochemical techniques. One three-hour laboratory. Prerequisite: C or better in CHEM 1270 and CHEM 1280. Extra fee.

CHEM 3080(3)
Elementary Biochemistry Laboratory
Spring, Summer. Basic biochemical techniques. One three-hour laboratory. Prerequisite or corequisite: CHEM 3080 or CHEM 4450. Extra fee.

CHEM 3130(1 - 3)
Special Topics in Chemistry
Fall, Spring, Summer. Specific topics of current interest in chemistry. Not applicable toward minimum 32-hour major or 20-hour minor. May be repeated with different topics.
Fall. Three lectures. A survey course of Physical Chemistry. For students whose program does not require full-year course. Prerequisites: CHEM 1270-CHEM 1280 and CHEM 2010 or CHEM 1370-CHEM 1380, MATH 1300. Prerequisite or corequisite: PHYS 2020 or PHYS 2120.

CHEM 4020(1)
Numerical Methods in Chemistry
Spring. Use of computers and numerical methods in chemistry; survey of computer graphics and microcomputer-based instrumentation in chemical research. Prerequisite or corequisite: CHEM 4050.

CHEM 4050(4)
Physical Chemistry
Fall. Four lectures. Thermodynamics and quantum chemistry. Prerequisites: CHEM 1370-CHEM 1380 or CHEM 1270-CHEM 1280 and CHEM 2010; MATH 2320 and either PHYS 2120 or PHYS 2020. Corequisite: CHEM 4070.

CHEM 4060(4)
Physical Chemistry
Spring. CHEM 4050 continued. Electrochemistry, kinetics, spectroscopy and molecular structure. Prerequisite: CHEM 4050.

CHEM 4070(2)
Integrated Analytical and Physical Laboratory
Fall. Two three-hour laboratories. Principles of measurement; spectral, chromatographic and electroanalytical techniques; thermodynamic and kinetic measurements; computerized data acquisition. Prerequisite or corequisite: CHEM 4050 or CHEM 3520. Extra fee.

CHEM 4080(2)
Integrated Analytical and Physical Laboratory
Spring. CHEM 4070 continued. Prerequisite: CHEM 4070; prerequisite or corequisite: CHEM 4060. Extra fee.

CHEM 4130(1 - 3)
Undergraduate Research
Fall. Independent study and research. Three to nine hours of laboratory, one half-hour conference each week. Not applicable toward minimum requirements of major or minor. Prerequisites: consent of instructor, 20 hours of CHEM or consent of department, 2.5 minimum overall GPA. May be repeated, but no more than six hours credit may be applied toward degree.

CHEM 4150(3)
Bioinorganic Chemistry
Spring. Three lectures. Role of inorganic chemistry in biological processes. Biological role of metal ions, structure and function of metalloproteins, electron-transfer reactions and medicinal applications of metal complexes. Prerequisites: CHEM 4060 and CHEM 4630.

CHEM 4420(3)
Organic Reaction Mechanisms
Spring. Fundamentals of organic reaction mechanisms and methods of their elucidation. Prerequisite: CHEM 3440 and CHEM 3450 or CHEM 3460. Prerequisite or corequisite: CHEM 4050.

CHEM 4450(3)
General Biochemistry
Fall. Three lectures. Structure, function, chemical, and physical properties of biomolecules with an emphasis on biomacromolecules. Prerequisite: CHEM 3440 and CHEM 3450 or CHEM 3460. BIOL 2050 is strongly recommended.

CHEM 4460(1)
Biochemistry Laboratory
Fall. Experimental techniques in biochemistry. Three-hour laboratory. Prerequisite or corequisite: CHEM 4450. Extra fee.

CHEM 4470(3)
General Biochemistry
Spring. Three lectures. Energetics and regulation of metabolic processes. Prerequisite: CHEM 4450.

CHEM 4540(3)
Instrumental Methods of Analysis
Spring. Theory of instrumental methods of analysis including electroanalytical, spectroscopic and chromatographic methods. Prerequisite: CHEM 4070 or consent of instructor.

CHEM 4630(3)
Advanced Inorganic Chemistry
Fall. Chemical bonding, stereochemistry, acid-base chemistry, periodicity, nonmetal and transition metal chemistry, organometallic and bioinorganic chemistry. Prerequisite: CHEM 4050.

CHEM 4660(3)
Spectroscopic Methods in Organic Chemistry
Fall. Organic structure determination by spectroscopic techniques, with emphasis on infrared, ultraviolet and nuclear magnetic resonance spectroscopy, and mass spectrometry. Prerequisite: CHEM 3440 and CHEM 3450 or CHEM 3460. Prerequisite or corequisite: CHEM 4050.

CHEM 4830(1 - 3)
Advanced Topics in Chemistry
Fall, Spring, Summer. Rigorous study of specific topics of current interest. Not applicable toward minimum 32-hour major or 20-hour minor. May be repeated with different topics. Prerequisite: CHEM 3440 and CHEM 3450 or CHEM 3460 or consent of instructor.

Subject: Chinese

CHIN 1010(4)
Elementary Language and Culture I
Introduction to Mandarin Chinese, the official standard language of Mainland China and Taiwan. Development of the four skills: listening, speaking, reading and writing. Four class periods and laboratory practice each week. Applicable to the BU Perspective (general education) humanities and arts and international perspective.
requirements.

CHIN 1020(4)
Elementary Language and Culture II
CHIN 1010 continued. Four class periods and laboratory practice each week. Prerequisite: CHIN 1010 or one year of high school Chinese, or equivalent. Applicable to the BG Perspective (general education) humanities and arts and international perspective requirements.

CHIN 2010(4)
Intermediate Chinese I
CHIN 1020 continued. Grammar and character writing review; continued development of the four skills. Four class periods and laboratory practice weekly. Prerequisite: CHIN 1020, two years of high school Chinese, or equivalent. Applicable to the BG Perspective (general education) humanities and arts and international perspective requirements.

CHIN 2020(4)
Intermediate Chinese II
CHIN 2010 continued. Four class periods and laboratory practice weekly. Prerequisite: CHIN 2010, two years of high school Chinese, or equivalent. Applicable to the BG Perspective (general education) humanities and arts and international perspective requirements.

CHIN 2160(3)
Contemporary Chinese Culture
Contemporary life in Chinese societies and crosscultural study of Chinese values. Study of culture as displayed in societal institutions and the arts. Presentations, readings, discussions, and writing in English. Applicable to the BG Perspective (general education) humanities and arts and international perspective requirements.

CHIN 3000(2 - 6)
Selected Topics in Chinese Language and Culture
Topic chosen from language, culture or literature to meet curriculum needs and student requests both on campus and in a study abroad setting. May be repeated with different topics up to 12 hours. Prerequisite: consent of instructor.

CHIN 4800(1 - 3)
Selected Topics in Chinese
Topics chosen from Chinese language, culture or thought to meet curriculum needs and student requests. May be repeated to six hours with different topics.

CHIN 4910(1 - 3)
Studies in Chinese
Independent reading for the advanced student. Prerequisites: arrangement with the instructor and consent of department chair prior to registration. May be repeated.

Subject: Classical Civilization

CLCV 2410(3) Great Greek Minds
Fall, Summer. Masterpieces of Greek literature in English translation: Homer, Sappho, Pindar, Aeschylus, Sophocles, Euripides, Aristophanes, Herodotus, Thucydides, Plato, Aristotle. Introduction to history, art, customs, and beliefs. No Greek required. No credit for both CLCV 2410 and CLCV 4850. Applicable to the BG Perspective (general education) humanities and arts requirement.

CLCV 2420(3)
Great Roman Minds
Spring. Masterpieces of Latin literature in English translation: Lucretius, Cicero, Catullus, Virgil, Horace, Livy, Ovid, Petronius, Tacitus, Juvenal, Martial. An introduction to history, art, customs and beliefs. No Latin required. No credit for both CLCV 2420 and CLCV 4860. Applicable to the BG Perspective (general education) humanities and arts requirement.

CLCV 2450(3)
Word Power from Greek and Latin Roots
Spring. Terms and concepts derived from Greek and Latin occurring in English; designed for premedical, preental, prelaw, language, sciences majors.

CLCV 3800(3)
Classical Mythology
Spring. Study in English of Greek and Roman myths; historical meanings and influence on life, literature and art. No Latin required. Applicable to the BG Perspective (general education) humanities and arts requirement.

CLCV 3810(3)
Roman Life
Fall. Study in English of Roman daily life and popular culture as described in literature and attested in history, art and archeology. No Latin required.

CLCV 3820(3)
Ancient Drama
Fall, Spring. Study in English of the drama of ancient Greece and Rome in its social and performance contexts. Special attention will be paid to pragmatic issues of stagecraft and dramaturgy. No Latin or Greek required.

CLCV 3880(1 - 3)
Topics in Classical Civilization
Fall, Spring, Summer. Exploration in English of Greek or Roman literature or culture. May be repeated with different topics up to 12 credits.

CLCV 4850(3)
Greek Civilization
Fall. Study of the literature, art, history, customs and beliefs of the ancient Greeks in English translation. For classical civilization majors or minors and students wanting to fulfill humanities requirement. No credit for both CLCV 2410 and CLCV 4850.
CLCV 4860 (3)
**Roman Civilization**
Spring. Study of literature, art, history, customs and beliefs of the ancient Romans in English translation. For classical civilization majors or minors and students wanting to fulfill humanities requirement. No credit for both CLCV 2420 and CLCV 4860.

CLCV 4990 (3)
**Apprentice Teaching**
On demand. Learn about teaching CLCV, GRK, or LAT course under the guidance of an experienced teacher. Student apprentice duties vary. Course cannot be used in partial fulfillment of CLCV or LAT major or minor. May be repeated to six credit hours. Prerequisite: consent of instructor.

**Subject: Construction Mgmt & Technology**

CONS 1010 (2)
**Topics in Construction**
Fall. Introduction to career objectives in a seminar setting with construction professionals. Introduces team building, professional practices, current issues in construction through readings and discussions of construction trade journals. Two hours lecture. Extra fee.

CONS 2350 (3)
**Introduction to Construction**
Fall, Spring. Basic concepts of construction management and technology, including office organization, building construction techniques, surveying, building materials, plan reading and estimating. One and one-half hours lecture, three hours laboratory. Extra fee.

CONS 2390 (3)
**Construction Document Reading**
Fall and Spring. An introductory course to construction document reading. Provides a basic working knowledge of construction drawings, design and construction mathematics, specifications, material submittal process, building codes, and material quantity take-off.

CONS 3060 (3)
**Residential Construction**
Spring. Residential and light commercial construction, including principles of project organization, market and site analyses, cost estimating, scheduling, financial management, construction techniques, contracting and marketing. One and one-half hour lecture, three hours laboratory. Prerequisites: Matriculated in CMT, AED or CMT/AED Dual Major. Extra fee.

CONS 3180 (3)
**Construction Surveying**
Fall. Detailed study of surveying, including field work, with equipment such as transit, level and tape. Emphasis on closure. One and one-half hours of lecture and three hours of laboratory. Prerequisites: Matriculated in CMT, AED or CMT/AED Dual Major. Extra fee.

CONS 3200 (3)
**Computer Application in Construction**
Fall and Spring. Computer applications of construction programs in the areas of materials, methods and management. Two hours lecture, two hours laboratory. Prerequisite: Matriculated student in CMT, AED or CMT/AED Dual Major. Extra fee.

CONS 3350 (3)
**Construction Materials and Testing**
Fall and Spring. Materials and testing as used in commercial construction. Emphasis on foundation, sitework, soils and concrete. One and one-half hours of lecture and three hours laboratory. Prerequisite: Matriculated in CMT, AED or CMT/AED Dual Major. Extra fee.

CONS 3360 (3)
**Structural Design**
Fall and Spring. Standard methods utilizing shear and bending stresses to size structural members. Emphasis on floor framing systems, columns and connections in steel and wood per design codes. Two hours of lecture and two hours laboratory. Prerequisites: ENGT 2400, PHYS 2010 and Matriculated in CMT, AED or CMT/AED Dual Major. Extra fee.

CONS 3370 (3)
**Heating, Ventilating and Air Conditioning Systems**
Spring. Mechanical systems for heating, ventilating, air conditioning cooling of buildings and in production processes. Experience with conventional and solar mechanical systems; determining losses, make-up, system sizing, control. Methods, materials and problems encountered in installing mechanical systems are stressed. One and one-half hours of lecture and three hours laboratory. Prerequisite: Matriculated in CMT, AED or CMT/AED Dual Major. Extra fee.

CONS 4060 (3)
**Temporary and Concrete Structures**
Fall and Spring. Design and construction of concrete structures. Placement of temporary framework including sheathing, bracing and shores. Concrete design of slabs, beams and columns. Three hours of lecture. Prerequisites: CONS 3360 and Matriculated in CMT, AED or CMT/AED Dual Major.

CONS 4110 (3)
**Construction Safety and Health Management**
Fall and Spring. This course will cover a broad spectrum of Occupational Safety and Health. It covers progressive management systems and effect on profit. The course will include the history of safety and health, the industry regulations, program development and implementation, hazard analysis, work-related injuries, and safety topics through hands-on training and government documents. The student may receive 30-hour OSHA card. Prerequisites: Junior Standing; CMT Major only or consent of instructor.

CONS 4350 (3)
**Construction Methods and Practices**
Fall and Spring. Advanced course in commercial construction emphasizing superintendent's role in planning,
CONS 4370(3)
Construction Equipment
Fall. Equipment factors related to construction operations. Ownership and operating costs and productivity of major construction equipment; frequent down-time items. One and one-half hours of lecture and three hours laboratory. Prerequisite: Matriculated in CMT, AED or CMT/AED Dual Major. Extra fee.

CONS 4390(3)
Estimating and Cost Control
Fall, Spring. Take-off, costing and pricing for typical construction project. Preparation of final bid document including all material, labor, equipment, overhead costs, and profit margin. Two hours of lecture and two hours of laboratory. Prerequisites: CONS 3200 and Matriculated in CMT, AED or CMT/AED Dual Major. Extra fee.

CONS 4400(3)
Construction Contracting
Fall, Spring. Type of construction procurement, contracts and specifications important to project management. Subcontracting, insurance, bonds, mechanics liens and labor relations. Concepts applied to cases. Two hours lecture, two hours laboratory. Prerequisite: Matriculated in CMT, AED, CMT/AED Dual Major, AMO, or ATM. Extra fee.

CONS 4420(3)
Construction Scheduling
Fall and Spring. Management utilizing critical path method, activity on arrow, Gantt charts and PERT techniques. Planning, scheduling, control, resource allocation and least-cost expediting using computers. Two hours lecture, two hours laboratory. Prerequisites: CONS 3200 and Matriculated in CMT, AED, CMT/AED Dual Major, AMO, or ATM. Extra fee.

CONS 4470(3)
Trenchless Technology Construction
Spring. Introduction to the different trenchless techniques including identification and quantification of the different components of each technique along with their advantages and disadvantages. One and one-half hours lecture, three hours laboratory. Prerequisite: Matriculated in CMT, AED or CMT/AED Dual Major. Extra fee.

CONS 4700(3)
Construction Capstone Project
Fall. Spring. Formulate a construction project manual using several software packages. The comprehensive manual includes schedule, quantity survey, estimate, project management considerations and a panel defense. Prerequisites: CONS 4390 or CONS 4420 and Matriculated in CMT, AED or CMT/AED Dual Major. Extra fee.

CONS 4900(1 - 3)
Problems in Construction Technology
For advanced students wanting to conduct intensive study of selected problems in construction technology. May be repeated. Prerequisite: Consent of instructor and Matriculated in CMT, AED or CMT/AED Dual Major.

Subject: Cooperative Education
COOP 50(0)
Cooperative Internship or Academic Internship
Fall, Spring, Summer. Work and study in business and industry, service or government agency in a supervised position related to major. May be repeated. Prerequisite: consent of cooperative education program.

Subject: Criminal Justice
CRJU 2100(3)
Introduction to Criminal Justice
Fall, Spring. Philosophical, historical, operational aspects of criminal justice agencies and processes in a framework of social control in a democracy. Crime and corrections problems and response of criminal justice agencies to them.

CRJU 2200(3)
Law Enforcement in American Society
Fall. Overview of the police role in modern American society; emphasis on problems and issues confronting police and solutions within an organizational framework. Prerequisite: CRJU major.

CRJU 2300(3)
Investigations: Theory and Practice
Spring. Investigator's role in various types of investigations criminal, civil, personal history and liability. Techniques of evaluation and preservation of data, sources of information; processes of specialized investigations. Prerequisite: CRJU major.

CRJU 2400(3)
Report Writing for Criminal Justice
Spring. A writing intensive course that places special emphasis on familiarizing students with the various writing requirements for criminal justice professionals. Prerequisites: CRJU 2100 and GSW 1120.

CRJU 3200(3)
Crime Prevention and Security
Spring. A critical examination of crime prevention and security practices and approaches; emphasis on evaluating the effectiveness and problems of various approaches. Prerequisite: CRJU major.

CRJU 3300(3)
Juvenile Justice Subsystems
Fall. Examination of the varied agencies, methods and techniques used in handling deviant youths (historic and contemporary); emphasis on agency effectiveness and perspectives. Prerequisite: CRJU major.

CRJU 3400(3)
Drugs, Crime and Criminal Justice
Spring. Explores the legal and social aspects of drug and alcohol use and the criminal justice response to that use. Topics include types and effects of drugs, relationship to crime and treatment of drug users. Criminal justice credit not given for both CRJU 3400 and HP 3400. Prerequisite: CRJU major.

CRJU 3950(1 - 3)
Workshop - Current Topics
May be repeated. Any semester. Special topics or issues in criminal justice, primarily of a current or unique interest to students/practitioners. Prerequisite: Fall and Spring terms only; CRJU major.

CRJU 4100(3)
Victimology
Spring. An examination of the victim in the criminal justice system. The course covers the development of victimology, basic concepts and issues, specific types of victimization and societal/system response to the victim. Prerequisite: CRJU major.

CRJU 4200(3)
The Criminal Courts
Fall. Structure, jurisdiction, procedures including the nature of criminal law and the interaction of other criminal justice agencies (police, prosecutor, probation) with the courts. Prerequisite: CRJU major.

CRJU 4300(3)
Procedural Rights
Spring. Rights afforded to individuals who come to the attention of the criminal justice system. How these rights are created and rejected by the court system. Focus on the Bill of Rights, 14th Amendment, and Supreme Court cases. Prerequisite: CRJU major and CRJU 4200.

CRJU 4700(1 - 3)
Independent Study in Criminal Justice
Fall, Spring, Summer. Student designs and carries out study or special project in area of interest. Prerequisite: CRJU major or consent of instructor. May be repeated.

CRJU 4800(3)
Senior Seminar in Criminal Justice
Fall, Spring, Summer. Consideration and evaluation of selected policies and practices in criminal justice field. Attempt to integrate criminal justice field and to focus on common problems and concerns. Problems of theoretical and practical nonconvergence. Individual research interests explored, formalized, reported. Required of all CRJU majors. Prerequisites: senior standing and completion of 25 hours of CRJU core courses.

CRJU 4860(1 - 3)
Workshop in Criminal Justice
On demand. Study of a particular topic in criminal justice. Topics may vary. May be repeated. Prerequisite: CRJU major or instructor permission.

CRJU 4910(1 - 12)
Practicum
Fall, Spring, Summer. Experience working in a criminal justice agency under both practitioner and academic supervision. Emphasis on practice rather than observation. May be repeated. Prerequisites: permission of program director and completion of GSW 1120 or equivalent. Concurrent enrollment in other courses permitted with permission of program director. Graded S/U.

CRJU 4920(3)
Practicum Seminar
Fall, Spring, Summer. Analysis of problems and experiences encountered in the practicum. Relations between field experiences, coursework and related literature. Prerequisite: permission of director. Corequisite: CRJU 4910.

Subject: Computer Science

CS 1000(3)
Computer Basics
Fall, Spring, Summer. Computer technology and related social issues. Hardware, software, applications in diverse areas. Problems concerning computerized services, data banks, governmental controls. Problem solving using software packages (such as Hypertext, spreadsheets, word processing, database, presentation graphics, etc.). Credit not applicable toward a major in computer science. Prerequisite: one year of high school algebra or MATH 95. Extra fee.

CS 1010(3)
Introduction to Programming
Fall, Spring, Summer. Algorithms. Programming language features: expressions, assignments, functions with parameters, conditions, loops, arrays. Several programming assignments required. Does not apply to the computer science major. Prerequisite: two years of high school algebra or MATH 95. Extra fee.

CS 1800(1 - 3)
Introductory Topics
Introduction to the use of a programming language or other computer software. Can be repeated to three hours if topics differ. Credit not applicable to major in computer science. Extra fee.

CS 1810(1 - 3)
Introductory Topics
Introduction to the use of a programming language or other computer software. Can be repeated to three hours if topics differ. Credit not applicable to major in computer science. Graded S/U.

CS 2010(3)
Programming Fundamentals
Fall, Spring, Summer. Problem solving and algorithm development. Basic programming concepts including elementary data types, arrays, strings, files, control structures, and functions. Searching and sorting algorithms. Testing and debugging strategies. Prerequisite: Two years of high school algebra or MATH 1120 or equivalent.

CS 2020(3)
Object-oriented Programming
Fall, Spring, Summer. Introduction to object-oriented programming techniques. Constructors, destructors, operator overloading. Inheritance and polymorphism. Elementary data structures including linked lists. Dynamic storage allocation concepts. Prerequisite: Grade of C or better in CS 2010.

CS 2170(3)
Computer Organization
Fall, Spring, Summer. Organization of digital computer hardware. Combinational and sequential circuits. Assembly language concepts. ALU, CPU, and control unit design. Projects will be implemented on a circuit simulator. Prerequisite: CS 2010.

CS 2800(1 - 3)
Intermediate Topics
Introduction to use of a programming language or other computer software. For students who already know how to program. Can be repeated to three hours if topics differ. Credit not applicable to major in computer science. Prerequisite: CS 1010 or CS 2010 or equivalent.

CS 2900(1)
Co-op Preparation
Fall. Introduction to the co-op experience. Resumes. How to work a job fair and how to interview. Job search strategies. Professional ethics and etiquette. Credit not applicable to a major in computer science. Prerequisite or corequisite: CS 2020. Graded S/U.

CS 3000(3)
Professional and Societal Issues in Computing
Summer. Impact of computers, the Internet and related computer technology on society and the social forces underlyin the rapid and widespread adoption of computer technology. Personal privacy, intellectual property, legislative and constitutional issues, changing labor force composition, professional ethics. Not a programming course. Prerequisite: CS 2010 or equivalent.

CS 3010(3)
Information Management Technologies
Spring. An introduction to technologies of current importance in information management application development, such as database management, computer graphics, artificial intelligence, and web development. Prerequisite: CS 2010.

CS 3140(3)
Web Application Development
Fall. A survey of web technologies and emerging web standards, protocols, markup languages, and scripting languages. Both client-side and server-side technologies and scripting languages are covered. Prerequisite: CS 2010.

CS 3160(3)
Windows Application Development
Spring. Implementing a graphical user interface on the Windows operating system with object-oriented programming. Event-driven programming; dialogs and controls; data validation; graphics; database access; n-tier application design. Prerequisite: CS 2010.

CS 3240(3)
Usability Engineering

CS 3270(3)
Operating Systems and Networks
Fall. Design of multiprocessing operating systems, process scheduling and synchronization. Device drivers and communication hardware. Networks and their topologies. Communication protocols and client/server environments with implication for operating system services and user programs. Prerequisites: CS 2020 and CS 2170.

CS 3350(3)
Standard Data Structures and Algorithms
Fall. Advanced programming concepts. Adaptation and use of standard class libraries and generic algorithms. Prerequisite: CS 2010.

CS 3600(3)
COBOL Programming
Spring. COBOL programming language and techniques for use; report generation; table handling; sorting; sequential and random-access data files; debugging techniques; COBOL standards. Prerequisite: Grade of "C" or better in CS 1010 or CS 2010. Extra fee.

CS 3710(1)
Introduction to Unix
Fall. The Unix operating system; utilities, file structure; pipes, filters; shell programming. Prerequisite: CS 1010 or CS 2010. Graded S/U.

CS 3720(2)
Unix System Administration
Fall. User accounts; devices and drivers; file systems and disk management; backups, startup and shutdown; network services and applications; print service; security issues. Graded S/U. Corequisite: CS 3710.

CS 3800(1 - 3)
Special Topics in Computer Science
Detailed study of the professional and ethical issues pertaining to computer science or of a particular computer system or programming language which is not covered elsewhere in the curriculum. May be repeated if topics differ. Prerequisite: CS 2010.

CS 3900(1 - 6)
Practicum in Computer Science
For students working in internship or co-op programs. Written report required. Does not apply to major or
minor in computer science. May be repeated to three hours. Students working through the co-op office may earn up to six hours of credit. Graded S/U.

CS 4080(3)
Advanced Operating Systems

CS 4090(3)
Language Design and Implementation
Fall. Fundamental concepts of languages. Processors, data, operations, sequence control, data control, storage management, syntax, translation. Prerequisite: CS 2170 and CS 3350.

CS 4100(3)
Formal Language Theory
Fall (odd years.) Various types of languages (context-sensitive, context-free, regular). Discussion of recognition devices such as pushdown automata, linear bounded automata and Turing Machines. Some topics of current interest. Prerequisite: MATH 2220 or MATH 3220.

CS 4170(3)
Introduction to Parallel Computing
Fall (even years). Principles and practice of parallel computing. Parallel program design, implementation and evaluation of parallel programs for shared memory, local memory and vector architectures. Prerequisite: CS 3270.

CS 4200(3)
Artificial Intelligence Methods
Summer (odd years). Intermediate AI programming with application to representative problems requiring searching, reasoning, planning, matching, deciding, parsing, seeing and learning. Prerequisite: Junior or senior standing.

CS 4250(3)
Computer Graphics
Spring (every year); Summer (even years). Graphic I-O devices; two-dimensional and three-dimensional display techniques; display processors; clipping and windowing; hidden-line removal; data structures for graphics. Prerequisites: CS 3350 and one of MATH 2220, MATH 3220, MATH 3320.

CS 4290(3)
Data Communication and Networks
Spring. Data communication concepts; network topologies; transmission media; network access control; communication protocols; network architecture; LANs, MANs, and WANs; internetworking. Prerequisite: CS 3270.

CS 4400(3)
Optimisation Techniques
Fall (even years). Linear programming, game theory, PERT, network analysis; duality theory and sensitivity analysis; applications. Computer programs written to implement several techniques. Prerequisites: CS 1010 or CS 2010 and either MATH 2220 or MATH 3220.

CS 4420(3)
Techniques of Simulation
Fall (odd years). Principles of simulation and application of simulation languages to both continuous and discrete systems. Prerequisites: MATH 2470 and CS 2020.

CS 4510(3)
Numerical Analysis
Fall. Study of numerical methods for interpolation and approximation, integration and differentiation, solution of non-linear equations and systems of linear and non-linear equations. Prerequisites: CS 1010, or CS 2010 and MATH 3320. Not open to students with credit for MATH 4510.

CS 4520(3)
Numerical Analysis
Spring. Numerical methods for the algebraic eigenvalue problem, solutions of ordinary differential equations; topics from approximation theory, numerical solution of partial differential equations, optimization techniques and sparse matrix computations. Prerequisites: CS 4510 and MATH 3370. Not open to students with credit for MATH 4520.

CS 4620(3)
Database Management Systems
Spring. Semantic models for conceptual and logical design of databases. Detailed study of relational systems: design, dependency and normal forms. Use of interactive and embedded query language. Overview of topics such as database connectivity, security and object-oriented systems. Prerequisite: CS 2020.

CS 4640(3)
Software Development
Fall. In-depth study of all aspects of software development process: user requirements, specifications, design, coding, testing, maintenance, documentation, management. Use of CASE tools for analysis and design. Prerequisite: CS 3240.

CS 4800(1 - 3)
Seminar in Computer Applications
Prerequisite: consent of instructor. May be repeated up to six hours.

CS 4900(1 - 3)
Independent Project
Readings and/or computer implementations in area of interest to individual student. Does not apply to a major in computer science. May be repeated up to six hours. Graded S/U.

Subject: Computer Science Technology
CST 1000(1)
Introduction to Programming Logic and Design
Introduction to programming skills needed to solve common business problems. Stresses structured programming and modular design, using pseudocode as the major program design technique.

CST 1020(1)
Information Technology Ethics
Introduction to ethics as it applies to information technology in the business environment. Exploration of the use of ethical practices and the negative impacts of unethical behavior. Development of an IT code of ethics.

CST 1200(3)
Introduction to Operating Systems
Introduction to fundamental operating systems concepts including basic commands, file structures and directories, disks and formatting, utilities, and editors. Prerequisite: CS 1000 or MIS 2000 or permission of instructor. Offered at Firelands only.

CST 1350(1)
Introduction to Web Page Development
Introduction to the creation of pages for the World Wide Web. Pages will be created using text editor. Features to be implemented include text formatting, links, text and background colors, images and image formats, maps, tables, and frames. Prerequisite: CS 1000 or MIS 2000 or permission of CPT program director. Offered at Firelands only. Approved for Distance Ed.

CST 1360(1)
Advanced Web Page Development
Creation of interactive Web pages. Topics include creating forms, using scripts to create dynamic Web pages, multimedia enhancement of Web pages, and introduction to Web page development packages. Prerequisite: CST 1350 or permission of CPT program director.

CST 1410(2)
Networking Fundamentals
Networking components (hardware) and basic network design. Basic networking terminology and concepts. Topics include the Open Systems Interconnect (OSI) model, contrasting TCP/IP and OSI, and network topologies. Prerequisite: CS 1000 or CS 1010 or MIS 2000 or permission of instructor.

CST 1420(2)
Beginning Router Configuration
Basic router elements. IP addressing and configuration. Router user interface, setup and configuration. Fundamentals of TCP/IP. Prerequisite: CST 1410.

CST 1430(3)
Intermediate Routing, Switching, and WAN Technologies
Examination of intermediate routing protocols, Ethernet switching, virtual Local Area Networks, and switch configuration. Wide Area Network technology, terminology, and protocols also are covered. Two hours lecture and two hours lab per week. Prerequisite: CST 1420 or permission of instructor.

CST 1450(2)
Introduction to Network Cabling
Introduction to copper-based cabling for voice and data. Understanding of industry standards, types of media and cabling, as well as signal transmission. Includes terminating cables, installing jacks, and testing cables. Planning and installing structured cabling for networking. Understanding documentation, design, and installation issues. One hour lecture and two hours lab. Prerequisite: none. Extra fee.

CST 1810(3)
Network and Internet Principles
Computer networking terminology and technology overview. Hardware and software components, data communication transmission, protocols, history of the Internet. Activities include accessing shared resources and using networking services.

CST 2520(3)
Helpdesk Troubleshooting
Examination of the helpdesk environment. Includes problem-solving and communication skills for providing end-user support. Topics include customer service skills, troubleshooting, and writing documentation for end-users. Prerequisites: CST 1020 and CST 1200 or permission of instructor.

CST 2540(3)
User Support for Desktop Applications
Installing, configuring, and troubleshooting desktop applications from the end-user standpoint. Managing installation and updates of desktop applications. Learning to resolve problems related to application usability and customization. Two hours lecture and two hours lab per week. Prerequisites: CST 1020 and CST 1200 or permission of instructor.

CST 2610(3)
Microcomputer Database Systems
Database principles using package in current, general use on microcomputers. Actual application of software capabilities in realistic situations. Prerequisite: CS 1010 or permission of instructor. Extra fee.

CST 2650(3)
Systems and Procedures
Continued study of the design and implementation of data systems as they apply to business. Integrated management information systems are created using contemporary microcomputer software packages. Prerequisite: CST 2610 or permission of instructor. Extra fee.

CST 2750(3)
Microcomputer Hardware Systems
Microcomputer hardware theory, selection, installation, and troubleshooting. Understanding of microcomputer components and their implications to the user. Emphasis on troubleshooting of hardware and software failures.
Two hours lecture, two hours lab per week. Prerequisite: CS 1000 or MIS 2000 or permission of instructor. Offered at Firelands only. Extra fee.

CST 2810(3)
Network and Internet Implementation
Installation and configuration of microcomputer network and Internet servers. Networking hardware, software, protocols, functions. Two hours lecture, two hours lab weekly. Prerequisites: CST 1810 or permission of instructor.

CST 2850(3)
Network Security Principles
Computer network security terminology and technology overview. Hardware, software, and policy issues. Ethics of network security. Activities include probing, testing, and securing networks using current commercial operating systems. Two hours lecture, two hours lab per week. Prerequisite: CST 1810 or permission of instructor.

CST 2900(1 - 3)
Experimental Studies in Computer Science
Contemporary computer topics. May be repeated up to 9 credits if topics vary.

CST 2910(1 - 3)
Field Experience
Paid field work in data processing or computer networking applications related to an occupational objective. One credit requires 1800 hours of work. May be repeated up to 3 credits. Prerequisite: permission of site supervisor and adviser.

Subject: Dance
DANC 1010(1)
Folk and Square Dance
Fall. Two contact hours. Dances of American and international cultures examined through active participation. Dance costumes, customs, music introduced with cultural information for more thorough understanding of specific dances. May be repeated up to four hours.

DANC 1020(1)
Ballroom Dance I
Fall, Spring. Two contact hours. Basic step patterns of social dances: Foxtrot, waltz, swing, polka, cha-cha. Leading and following as a dance partner; music and rhythms. May be repeated up to four hours.

DANC 1070(2)
Jazz Dance Technique and Theory I
Fall, Spring. Introduction to the technique of jazz concert dance, and study of its history and place in American vernacular and theatrical performance styles. May be repeated for up to six credit hours.

DANC 1100(1)
Tap Dance I
Fall, Spring, Summer. Two contact hours. For student with limited to no previous dance training. Studio instruction of basic tap dance technique and historical origins. May be repeated to four hours.

DANC 1150(3)
Modern Dance Technique and Theory I
Fall, Spring. Beginning level study in foundational principles, practices, and vocabulary of various styles of modern dance, focusing on coordination, alignment, and conditioning. Includes an overview of historical developments in modern dance. May be repeated up to nine credit hours. Extra fee.

DANC 1200(2)
Ballet Technique and Theory I
Fall, Spring. Introductory instruction in ballet technique fundamentals with emphasis on alignment, barre, and basic center vocabulary with an overview to the history and personalities important to its development. May be repeated up to six credit hours. Extra fee.

DANC 1500(3)
Dance Appreciation
Fall. An introductory overview of dance as it pertains to culture, aesthetics, the arts, recreation, entertainment and the creative process.

DANC 2070(2)
Jazz Dance & Pop Forms
Fall, Spring. This course is the second in a series of jazz dance technique, emphasizing increased technical and performance levels with the addition of popular dance forms such as street funk and hip hop dance styles. Rhythmic complexity, improvisation, and the history of jazz and popular dance forms are emphasized. May be repeated up to six credit hours. Prerequisites: DANC 1070 or equivalent.

DANC 2150(3)
Modern Dance Technique and Theory II
Fall, Spring. The second in a series of progressions stressing individual development at the intermediate level in technique and theory of modern dance in a variety of modern styles with focus on historic to current trends. Technique level competency will be evaluated on first day. May be repeated up to nine credit hours. Prerequisite: DANC 1150. Extra fee.

DANC 2200(2)
Ballet Technique and Theory II
Fall, Spring. Intermediate study in technique, theory, and history of ballet with an emphasis on skill advancement in adagio and allegro work to support technical performance in other dance forms. Technique level competency will be evaluated on first day. May be repeated up to six credit hours. Prerequisite: DANC 1200. Extra fee.

DANC 2240(1)
Dance Repertory I
Fall, Spring. A dance performance ensemble that models a professional modern dance company through
experiences in concert dance performance, choreography and production work. May be repeated up to four credit hours. Prerequisites: By audition.

**DANC 3160 (3)**

**Modern Dance Technique and Theory III**

Fall, Spring. Advanced technique and theory in a variety of styles of modern dance emphasizing individual development of performance quality, with focus on turns, falls, jumps, leaps, and complex rhythmic combinations, and continuing study of history and current trends. May be repeated up to nine credit hours. Prerequisite: DANC 2150. Extra fee.

**DANC 3250 (3)**

**Theory and Methods of Teaching Dance**

Fall alternate years. Investigation and practice of the pedagogical practices of modern, ballet and jazz dance. Prerequisites: At least two of the following: DANC 2070, DANC 2150, or DANC 2200.

**DANC 3260 (3)**

**Dance Composition**

Spring. The first of a two course series pertaining to the creation of dance works. Emphasis is placed upon the study of compositional tools used in solo, duet, and small group works, and the analysis of the communicated expression via those devices. Prerequisites: DANC 2070, DANC 2150, or DANC 2200.

**DANC 3500 (3)**

**Dance in World Cultures**

Spring, alternating years. Based in dance ethnology, dance in world cultures is explored as a social phenomenon, reflecting cultural values and socio-political history, covering various global cultures to investigate how dance reflects its social context.

**DANC 3870 (1 - 4)**

**Practicum in Dance I**

Fall, Spring, Summer. Under supervision of dance faculty in School of HMSLS; petitioning required before registration; credit hours approved by dance faculty. Prerequisites: Completion of 60 hours and overall 2.5 GPA. May be repeated.

**DANC 3950 (1 - 3)**

**Workshop on Current Topics in Dance**

Intensive study of selected topics in dance. May be repeated up to 12 credit hours if topics are different.

**DANC 4220 (1)**

**Dance Repertory II**

Fall, Spring. A dance performance ensemble that models a professional modern dance company through more advanced experiences in concert dance performance, choreography and production work, emphasizing leadership roles. May be repeated up to four credit hours. Prerequisite: By audition.

**DANC 4240 (3)**

**Dance History I**

Fall alternate years. The effects of culture, philosophy, persons and events on dance from primitive times to 1900s.

**DANC 4250 (3)**

**Dance History II**

Spring alternate years. Dance developments from 1900 to present; influential events, personalities, technologies and philosophies.

**DANC 4260 (3)**

**Dance Production**

Spring. Classroom and hands-on experience; problems and techniques in dance lighting, sound, costuming, direction, publicity and general management.

**DANC 4270 (3)**

**Choreography & Design**

Fall, alternate years. The continuing study of dance composition with an in-depth focus on choreographic elements of design including use of technology for creating dance work. Prerequisite: DANC 3260.

**DANC 4700 (1 - 3)**

**Independent Study in Dance**

Fall, Spring, Summer. In-depth study project of topic of particular significance to student. Project must be approved by project supervisor and division chair before registration. May be repeated. Prerequisite: permission of instructor.

**DANC 4870 (1 - 6)**

**Practicum in Dance II**

Fall, Spring, Summer. Under supervision of dance faculty in School of HMSLS; petitioning required before registration; credit hours approved by dance faculty. Prerequisites: DANC 3870 and overall 2.5 GPA. May be repeated.

Subject: Mechanical Design

**DESN 1040 (3)**

**Design and Engineering Graphics I**

Fall, Spring. Design as process and engineering graphics as the vehicle to communicate problem solutions. Documented design analysis, freehand sketching, geometric construction, orthographic projection; shape, size and position dimensioning and isometric pictorial drawing. One two-hour lecture and one two-hour laboratory per week. Extra fee.

**DESN 2050 (3)**

**Desn Representatinn II**

Importance and economics of tooling designed for mass production; topics include jigs, dies, design and construction, emphasis on die design problems and solutions. Field visits to die-stamping plants. Two hours lecture, six hours laboratory. Prerequisite: DESN 1040. Extra fee.
DESN 2900 (1 - 3)
Problems in Design Technology
For advanced students wanting to conduct intensive study of selected problems in design technology. May be repeated up to 6 credits if topics vary. Prerequisites: sophomore standing and consent of instructor.

DESN 4900 (1 - 3)
Problems in Design Technology
Independent Study. For advanced students wanting to conduct intensive study of selected problems in design technology. Prerequisite: junior standing and consent of adviser. May be repeated. Graded S/U.

Subject: Human Services

DHS 3000 (3)
Research Methods for the Human Services
Fall, Spring. Survey of research methods including research design, measurement and sampling, survey, experimental and field methods and data collection and analysis. Emphasis on interpreting and critically evaluating research for human services. Prerequisite: CRJU, SOWK, or GERO major or LTC specialization.

DHS 3300 (3)
Interviewing and Observation
Fall, Spring. Development of interviewing and observational skills used in working with diverse populations in human service fields. Examine interviewing from various perspectives for different purposes: clinical, forensic, organizational, and social. Prerequisite: CRJU, SOWK, or GERO major or LTC specialization.

Subject: Economics

ECON 2000 (3)
Introduction to Economics
Fall, Spring. Alternative economic goals; economic growth, full employment, price stability, fair income distribution, economic security, economic freedom, consumer sovereignty, efficiency. Recommended for students taking only one ECON course. Does not count toward the total hours of economics required for BSBA, BS in economics, BA in economics, or minor in economics; cannot be used to satisfy specialization, non-business nor free elective requirements for BSBA degree. No credit for students who have credit for either ECON 2020 or ECON 2030. Applicable to the BG Perspective (general education) social sciences requirement.

ECON 2020 (3)
Principles of Microeconomics
Fall, Spring. Price and allocation of resources. Demand, supply; price theory; income distribution; market failure; current problems and public policy. Enhances students' ability to evaluate economic policy. Recommended before ECON 2030. Prerequisite: high school algebra or equivalent. Applicable to the BG Perspective (general education) social sciences requirement.

ECON 2030 (3)
Principles of Macroeconomics
Fall, Spring. National income and employment, inflation, banking system, monetary and fiscal policy; economic growth and development; international economics. Develops students' understanding of tradeoffs and enhances critical reasoning abilities. Prerequisite: ECON 2020 or with consent of department. Applicable to the BG Perspective (general education) social sciences requirement.

ECON 3010 (3)
Price Theory and Applications
On demand. This is a non-calculus version of ECON 3020 and is designed for students pursuing the BA in economics. Course topics include theory of demand, of the firm, of production and distribution. Compares market structures. Factor price determination and welfare economics. Prerequisites: ECON 2020, ECON 2030 and MATH 1230 or MATH 1220 or equivalent or higher. No credit is allowed toward the BSBA degree or the BS in economics degree.

ECON 3020 (3)
Intermediate Microeconomic Theory
Fall, Spring. Theoretical course on decisions by consumers and firms. Theory of demand, of the firm, of production and distribution. Compares market structures. Factor price determination and welfare economics. Prerequisites: ECON 2020, ECON 2030, and either MATH 1260, MATH 1310 or equivalent.

ECON 3030 (3)
Intermediate Macroeconomic Theory
Fall, Spring. Theoretical course on how the economy as a whole operates. Measurement and determination of national income, employment, the price level, interest rates and growth. International influences on the economy. Alternative theories are compared. Prerequisites: ECON 2020 and ECON 2030.

ECON 3040 (3)
Managerial Economics
Fall, Spring. Applications of microeconomic theory to decision-making process of the firm. A profit maximizing framework is developed to apply and adapt to a diverse set of issues related to contrasting market structures and alternative pricing policies. Prerequisites: ECON 2020, ECON 2030, and either MATH 1260, MATH 1310 or equivalent.

ECON 3110 (3)
Money and Banking
Fall, Spring. Monetary policy and financial institutions. Causes and effects of changes in the money supply. Interest rates, commercial banking, central banking policy and international monetary institutions. Prerequisites: ECON 2020 and ECON 2030.

ECON 3210 (3)
Labor Economics
Spring. Economics of manpower employment and labor market; labor organizations, collective bargaining, regulation of labor by government, wage determination, unemployment and social security. Prerequisites: ECON 2020 and ECON 2030.

ECON 3230 (3)
Poverty and Discrimination
Fall alternate years. Analysis of poverty, emphasis on effect of discrimination on economic opportunities of the poor. Measures of poverty and income inequality and their use in development of public policy over time.
Effect of poverty on women, public policy directed toward poor women, international comparison of poverty and social responses to poverty. Prerequisites: ECON 2020 and ECON 2030 or consent of instructor.

**ECON 3350(3)**  
Environmental Economics  
Fall. Implications of environmental philosophies; benefit-cost analysis with applications; economics of pollution and resource management; application of economic tools to environmental problems. Prerequisite: ECON 2020 or consent of instructor.

**ECON 3510(3)**  
International Trade and Finance  
Fall, Spring. Structure and regulation of foreign trade, mechanics of international finance, new elements in U.S. foreign trade. Prerequisites: ECON 2030 or BA 3900.

**ECON 4010(3)**  
Mathematical Economics  
Spring. Economic theory in mathematical context; microeconomic and macroeconomic models, their structure and analysis. Constrained optimization. Prerequisites: MATH 1260 or equivalent, and ECON 3020 or ECON 3030.

**ECON 4020(3)**  
Econometrics  
Fall. Statistical techniques used to measure economic data and to test validity of theoretical models. Prerequisite: STAT 2120 or STAT 2200.

**ECON 4050(3)**  
Game Theory  
Principles of elementary game theory. Topics include: bargaining, firm strategy and industrial organization, voting, evolutionary game theory, and incentive pay schemes. The course also includes the analysis of games of incomplete information, where asymmetric information and the associated concepts of moral hazard and adverse selection are crucial. Prerequisites: ECON 2020, ECON 2030, and one of MATH 1220, MATH 1260, or MATH 1310; or consent of instructor.

**ECON 4140(3)**  
Monetary and Fiscal Policy  
Spring. Objectives, means and analysis of monetary and fiscal control; effect on total economic activity. Prerequisite: ECON 3030 or ECON 3110.

**ECON 4220(3)**  
Labor Relations Policy  
Spring. Collective bargaining and labor negotiation and their ties to federal and state legislation process, including negotiation and arbitration procedures. Prerequisite: ECON 2000 or ECON 2020 or consent of instructor.

**ECON 4260(3)**  
Public Health Economics  
Spring. Role of economics of health care and more specifically public health. Basic micro economics are applied to health care and how health care economics might differ from economics of the firm, examines trade-offs between approaches to health care and economic policy relative to public health. Prerequisite: ECON 2000, ECON 2020 or consent of instructor.

**ECON 4310(3)**  
Public Finance  
Fall. Survey of government finance. Public expenditures, taxation and debt; emphasis on federal level. Prerequisites: ECON 2020 and ECON 2030 or consent of instructor.

**ECON 4400(3)**  
Women, The Economy and Society  
Spring. Role of gender in the world economy, varieties of feminism, feminization of poverty, the relationship between household and labor market roles, the integration of women into the working world, causes of and responses to the gender wage gap, causes and alternative reactions to sex discrimination in labor markets. Prerequisite: ECON 2020 or consent of instructor.

**ECON 4520(3)**  
International Monetary Economics  
Spring. Macroeconomic side of international economics. Open economy macroeconomics, exchange rates and the balance of payments, fiscal and monetary policy, fixed versus floating exchange rates, budget deficits and international coordination of macroeconomic policies. Prerequisites: ECON 3030 (or ECON 3110) and ECON 3510 or consent of instructor.

**ECON 4540(3)**  
Economic Development  
Fall. Obstacles to and current efforts for promotion of economic growth in emerging nations. Prerequisite: ECON 2020 or consent of instructor.

**ECON 4620(3)**  
Urban Economics  
Spring. Urban spatial theory and analysis, economic analysis of urban problems including poverty, housing, transportation, the environment and public finance. Prerequisites: ECON 2020 and ECON 2030.

**ECON 4720(3)**  
Comparative Economic Systems  
Spring. Economic structures, conditions, problems and policies in a selection of countries. Prerequisites: ECON 2020 and ECON 2030 or consent of instructor.

**ECON 4730(3)**  
History of Economic Thought  
Fall. Development of economics and economic analysis from Adam Smith to J.M. Keynes. Prerequisites: ECON 2020 and ECON 2030.
Seminar in Contemporary Economic Problems
On demand. Interested students should consult with chair of department.

ECON 4910(1 - 3)
Studies in Economics
On demand. Treatment of selected areas in depth. Offered to individual on lecture basis or in seminar depending on student needs and material. May be repeated to six hours.

ECON 4950H(3 - 6)
Readings for Honors in Economics
On demand. For economics major with accumulative GPA of 3.0; normally culminates in treatise or comprehensive examination which must receive approval of department. Consult department chair. Prerequisite: consent of department.

Subject: Electronics & Computer Technology

ECT 1000(1)
Electric Codes and Regulations
National Electric Code and its application to wiring installations. Electric principles that dictate the provisions of the code. Wiring installations are examined for adequacy and compliance with the code.

ECT 1910(3)
Energy, Power, Instrumentation and Control
Principles of automated systems, how machines work and emphasizing energy, power, measurement and controlling devices. One and one-half hour lecture and three hours laboratory. Extra fee.

ECT 1960(3)
Electrical-Electronic Systems
Fall, Spring. Electrical principles, instruments, electrical machines, selected electronic devices and computer control systems. Also, fabrication and assembly techniques are covered. One and one-half hours of lecture and three hours of laboratory. Prerequisite: None. Extra fee.

ECT 2400(3)
Electric Circuits
Fall. Electron theory; DC and AC units and theory; circuit components; circuit analysis techniques; RLC circuits; power concepts; use of test instruments. Two hours lecture and two hours laboratory. Prerequisite: MATH 1280 or equivalent or consent of instructor. Extra fee.

ECT 2410(3)
Electronic Circuits
Spring. Analog and digital electronic circuits and semiconductors. Design and application of power supplies, amplifiers, oscillators and digital gates to communication, instrumentation and process control. Two hours of lecture and two hours of laboratory. Prerequisite: ECT 2400 or permission of instructor. Extra fee.

ECT 2440(3)
Communication Circuits
Communication circuits including telecommunications and amplifiers; amplifier design, components and applications, oscillators, communication components and principles of receivers and transmitters. Six hours of lecture and laboratory. Prerequisite: ECT 2410 or permission of instructor. Extra fee.

ECT 2450(4)
Communications Systems
Applications of principles of communications circuits to large and complex systems including telecommunications. Techniques of transmission and radiation of electromagnetic energy applied to pulse, television and microwave systems. Six hours of lecture and laboratory. Prerequisite: ECT 2410. Extra fee.

ECT 2470(3)
Electrical Measurements and Instrumentation
Electrical measurement and instrumentation devices, transducers and elements; principles underlying their design and use. Two hours of lecture, three hours of laboratory. Prerequisite: ECT 2410. Extra fee.

ECT 2480(3)
Industrial Equipment and Controls
Automation and industrial control principles. Study and application of typical devices such as time control switches, motor controls, servo-mechanism, photoelectric switches. Two hours of lecture, three hours of laboratory. Prerequisite: ECT 2410. Extra fee.

ECT 2490(3)
Digital Electronic Components and Systems
Spring. Basic digital system logic analysis and synthesis techniques; number systems and codes; Boolean algebra and circuit minimization techniques. Characteristics of modern digital integrated circuit components. Two hours lecture and three hours of laboratory. Prerequisite: ECT 1910 or ECT 1960 or consent of instructor. Extra fee.

ECT 2500(4)
Real Time Microcomputer Systems for Industrial Control
Principles and practices of interfacing microcomputers in the real time environment of industrial process control. Organization and operation of computers, various process control modules (A/D and D/A), signal conditioning and converting, and design of process control systems. Three hours of lecture, three hours of laboratory. Prerequisite: ECT 2490 or consent of instructor. Extra fee.

ECT 2900(1 - 3)
Studies in Electronic Technology
Experimental study projects, seminars and workshops dealing with topics in industrial technology. May be repeated up to six credits if topics vary.

ECT 3000(3)
Electric Machinery and Controls
Spring. Electric motors, generators, power electronic controls; operating characteristics, selection, testing and control of direct current, single and three-phase machinery. One and one-half hours of lecture and three
ECT 3100 (3)  
Programmable Logic Controllers  
Fall. A study of programmable logic controllers including, programming in ladder diagrams for counting, sequencing and timing functions, input/output modules, planning, installation and applications. One and one-half hours of lecture and three hours of laboratory. Prerequisite: ECT 2410. Extra fee.

ECT 3410 (3)  
Electronic Devices  
Fall. A study of semiconductor devices, FET transistors, operational amplifiers, power-electronic and optoelectronic devices including theory of operation, specifications, performance testing and applications. One and one-half hours lecture and three hour laboratory. Prerequisite: ECT 2410 or consent of instructor. Extra fee.

ECT 3440 (3)  
Electronic Communication Circuits  
Spring. The principles of electronic circuits as applied to large and complex telecommunication systems. One and one-half hours lecture and three hours laboratory. Prerequisite: ECT 2410. Extra fee.

ECT 3490 (3)  
Digital Computer Analysis  
Fall. Organization and construction of mini-micro computers, machine language programming, interfacing, including developing logical design, selection of integrated circuits, assembly, testing and system diagnostic testing procedures. One and one-half hours of lecture and three hours of laboratory. Prerequisite: ECT 2490 or consent of instructor. Extra fee.

ECT 3570 (3)  
Electrical Power Transmission  
Fall odd years. Power converters, polyphase distribution systems including conductors, transformers, voltage regulation, protection, control, phasing and metering. Electrical codes, methods and materials used in electrical installation. Problems in electrical construction work. One and one-half hours lecture and three hours laboratory. Prerequisite: ECT 1910 or ECT 1960. Extra fee.

ECT 3580 (4)  
Digital Electronics  
Fall. Digital integrated circuit devices with medium and large scale applications. Digital families, their functions, use of specification sheets, discussion of digital system. Two and one-half hours lecture and three hours laboratory. Prerequisite: ECT 2410 or PHYS 2020.

ECT 3860 (3)  
Digital Communication Networks I  
Spring. Introduction to fundamental digital communication and networking concepts and practices within workstation-centered technologies. Concept topics include: data encapsulation and transmission, and network models. Practices include those necessary for the creation of local area networks, such as workstation configuration, and router/switch setup. Prerequisite: consent of instructor. Extra fee.

ECT 4410 (3)  
Instrumentation  
Fall. Industrial instrumentation, measuring thermal, mechanical, fluid and electric phenomenon. Transducers, signal conditioning, data acquisition, software development and sensor networks. Principles underlying their design and applications. One and one-half hours lecture and three hours laboratory. Prerequisites: ECT 2410 and CS 2010 or consent of instructor. Extra fee.

ECT 4450 (3)  
Wireless Communication Systems  
Fall. A study of the concepts of transmission, radiation and reception of electromagnetic energy in communication systems, with focus on wireless communication systems. One and one-half hours lecture and three hours laboratory. Prerequisite: ECT 3440. Extra fee.

ECT 4530 (3)  
Digital Computer for Process Control  
Spring. Basic concepts, terminology, evaluation and types of control systems as they apply to industrial process control and positioning systems. These systems will be subdivided into measurement, controllers, fieldbus networks and final control elements. One and one-half hours lecture and three hours laboratory. Prerequisites: ECT 2490 or CS 2170, CS 2010, MATH 1310 or equivalent. Extra fee.

ECT 4790 (3)  
Digital Communication Networks II  
Fall. Digital communication and networking concepts and practices with emphasis on wide area network (WAN) topologies. Concepts topics include: WAN hardware and WAN management. Practices include those necessary for the creation of WANs, such as router and server configuration. One and one-half hours lecture and three hours laboratory. Prerequisite: ECT 3860. Extra fee.

ECT 4900 (1 - 3)  
Problems in Electronics and Computer Technology  
For advanced students wanting to conduct intensive study of selected problems in electronics and computer technology. May be repeated. Prerequisite: consent of college. Graded S/U.

Subject: Education Administration & Supervision  
EDAS 4090 (3)  
Organization and Administration of Education in American Society  
Fall, Spring, Summer. Local, state and federal involvement in American education, current educational and legal issues, organization of schools, school finance, job placement, professional responsibilities of teachers. Prerequisite: EDFI 3020/EDFI 3030. C/F hours: 20.

EDAS 4900 (1 - 3)  
Problems in Education  
For advanced student wanting to conduct intensive study of selected problems in education. May be repeated to
**Subject: Educational Foundations & Inquiry**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>EDFI 2020(3)</td>
<td>Introduction to Teaching</td>
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<td>Introductory clinical field experience to the education profession. Course includes 10 weeks of participant/observation in secondary and elementary classroom settings, with an emphasis on diversity of school experiences. Field component will provide opportunity to apply learning from weekly campus seminars which examine and apply professional educational knowledge. Prerequisites: Sophomore status recommended. Required in all teacher certification programs except those offering an approved alternative. Grade of C or better required to be eligible for student teaching. Cross-listed in EDCI. C/F hrs.: 50.</td>
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<tr>
<td>EDFI 3000(1)</td>
<td>Academic Service Learning Applied to Educational Psychology</td>
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<td>Fall, Spring, Summer. Supervised academic service learning experiences applying theories, principles, and research from educational psychology to individual and small group instruction of students in grades PK-12. Twenty (20) field experience hours will be conducted in area schools and other university and community settings. Transportation required. Corequisite: EDFI 3010.</td>
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<tr>
<td>EDFI 3010(3)</td>
<td>Educational Psychology Applied to Early Childhood</td>
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<td>Fall, Spring, Summer. Theory and research on the development of cognition, learning, and motivation, as applied to educational processes in various learning environments with a concentration on early childhood. Prerequisites: EDHD 2010, Introduction to Education; HDFS 2210, Child Development; and sophomore status. Credit not allowed for both EDFI 3010 and EDFI 3020.</td>
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<tr>
<td>EDFI 3020(3)</td>
<td>Educational Psychology</td>
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<tr>
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<td>Fall, Spring, Summer. Theory and research on learning, development, personality and motivation applied to educational processes in various learning environments. Some field or clinical work. Prerequisites: PSYC 1010 and sophomore status. C/F hrs.: 20.</td>
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<tr>
<td>EDFI 3030(3)</td>
<td>Educational Psychology Applied to Adolescent Development</td>
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<td>Fall, Spring. Theory and research on socioemotional development, cognition, learning, and motivation, as applied to educational processes in various learning environments with a concentration on the adolescent years. Co-requisite field experience: EDFI 4200 recommended. Prerequisites: PSYC 1010 and sophomore status.</td>
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<tr>
<td>EDFI 3950(1 - 3)</td>
<td>Workshop on Current Topics</td>
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<td>Intensive educational experience on selected topics related to skill development, content update or materials development. Typically, an all-day or similar concentrated time format used. Requirements usually met within time format. May be repeated on approval of adviser.</td>
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<tr>
<td>EDFI 4020(3)</td>
<td>Assessment and Evaluation in Education</td>
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<td>Fall, Spring, Summer. Assessment and evaluation applied to instructional procedures; construction of assessment tools; interpretations of assessment results. Prerequisites: EDFI 3020 or EDFI 3030. C/F hrs.: 20.</td>
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<tr>
<td>EDFI 4050(3)</td>
<td>Psychological Foundations of Classroom Management</td>
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<td>A survey of major approaches to classroom management with particular emphasis upon the applications of different approaches to case studies, to field observations, and to personal attitudes and values. Prerequisites: PSYC 1010 and either EDFI 2020/EDCI 2020 or EDFI 3020.</td>
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<tr>
<td>EDFI 4080(3)</td>
<td>Education in a Pluralistic Society</td>
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<td>Critical interdisciplinary examination of schooling in a democratic pluralistic society. Survey of major theories, concepts, and issues of contemporary education. Development of a personal philosophy of education informed by debates on multiculturalism and equity. Prerequisites: EDFI 3010, EDFI 3020 or EDFI 3030 and junior standing or instructor's permission. C/F hrs.: 10. Applicable to the BG Perspective (general education) cultural diversity in the United States requirement.</td>
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<tr>
<td>EDFI 4160(3)</td>
<td>Philosophy of Environmental Education</td>
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<td>Concepts and processes of environmental education including theories such as Toledo model, Strand approach, Environmental Studies Project, Boulder and other representative model.</td>
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<tr>
<td>EDFI 4170(2)</td>
<td>Urban Education</td>
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<td>Research, methods and concepts from sociology and psychology discussed as basis for critically analyzing current educational practices, program and policies of urban schools. Resource people used. Library and field research required. Prerequisite: commitment to, or at least serious interest in, urban education.</td>
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<tr>
<td>EDFI 4200(1 - 2)</td>
<td>Practicum in Individual and Small Group Instruction</td>
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<td>Fall, Spring. Supervised practicum experiences involving individual and small group instruction of students in grades K-12 conducted in area schools and other university/community settings. May be taken concurrently with EDFI 3020, EDFI 4020, EDFI 4080 or EDFI 4170 with instructor approval. May be repeated up to 4 hours.</td>
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<tr>
<td>EDFI 4600(2)</td>
<td>Sex Role Stereotyping and Sex Discrimination in Education</td>
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<td>Education as influential institution and process in society in terms of sexism in educational materials, curricula, structure, federal, state, local policy responses to this concern; consideration and development of other policies for action regarding sex equity in education.</td>
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<tr>
<td>EDFI 4800(3)</td>
<td>Seminar in Educational Foundations</td>
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</table>
In-depth study of selected topics, offered on demand. May be repeated once if subject matter is different.

EDFI 4820 (1 - 5)
Direct Study of the Child
Part of behavior analysis program. A child studied using predetermined framework.

EDFI 4900 (1 - 3)
Problems in Education
For advanced student wanting to conduct intensive study of selected problems in education. May be repeated to 6 hours; undergraduate credit only. Prerequisite: permission of instructor.

**Subject: Education & Human Development**

EDHD 1000 (1)
Service Learning
Service learning links community service with academic study. Students learn through active participation in thoughtfully organized service. May be repeated. Graded S/U.

EDHD 2000 (1)
Service Learning
Service learning links community service with academic study. Students learn through active participation in thoughtfully organized service. May be repeated. Graded S/U.

EDHD 2010 (2)
Introduction to Education
Fall, Spring, Summer on demand. Introduction to educational foundation topics and contemporary issues for prospective teachers. Explore and analyze the teaching profession in a weekly seminar and a service learning experience. Required as an entry-year experience for all teacher-education candidates. C/F hrs.: 20.

EDHD 3000 (1)
Service Learning
Service learning links community service with academic study. Students learn through active participation in thoughtfully organized service. May be repeated. Graded S/U.

EDHD 4000 (1)
Service Learning
Service learning links community service with academic study. Students learn through active participation in thoughtfully organized service. May be repeated. Graded S/U.

**Subject: Educational Intervention Services**

EDIS 2310 (3)
Teaching Students with Exceptionalities
Fall, Spring, Summer. The nature and characteristics of students with exceptionalities, legal issues in special education, issues in definitions and identification of exceptionalities and ways to adapt learning environments, including methods, materials, classroom arrangement, etc. to meet the needs of all students. Prerequisites: EDHD 2010. C/F hrs.: 15. IS majors must take for a letter grade.

EDIS 3100 (3)
Second Year Field Experience
Introduction to breadth and depth of the field of special education, professional and consumer organizations, professional opportunities. Spend extended time with persons with special needs in different settings. Prerequisites: EDHD 2010; C/F hrs. 60. Graded S/U.

EDIS 3240 (3)
American Sign Language I
Basic vocabulary and grammatical structure of the visual language system used by deaf persons in North America. Implications of deafness for language and communication, psycholinguistic studies of Sign. Registration priority given to majors in Mild/Moderate, Moderate/Intensive, Deaf/Hard of Hearing, Developmental Disabilities and Habilitation, Adapted Physical Education, Communication Disorders. Non-majors will be added through wait lists as space allows.

EDIS 3250 (3)
American Sign Language II
Students will expand conversational range including situations such as giving directions, making requests, establishing connections with Deaf persons, handling interruptions during conversations. Students will learn historical aspects of Deaf education and Deaf organizations. Prerequisites: EDIS 3240 or consent of instructor. Registration priority given to majors in Mild/Moderate, Moderate/Intensive, Deaf/Hard of Hearing, Developmental Disabilities and Habilitation, Communication Disorders. Non-majors will be added through wait lists as space allows.

EDIS 3260 (3)
American Sign Language III
This course is to foster and increase competence of American Sign Language (ASL) emphasizing advanced ASL structures in dialogue, narrative, and conversational formats encouraging students to establish and maintain social relationships with Deaf people. This is a continuation of ASL II, expanding the emphasis on ASL grammar, syntax, spatial referencing, and vocabulary development. Prerequisite: EDIS 3250 or consent of instructor.

EDIS 3270 (3)
American Sign Language IV
This course is to advance competence of ASL understanding. Students will develop comprehension in context of medium-length stories, narratives, and dialogues. This further encourages ASL skills in order for students to establish and maintain social relationships with deaf people. This course is a continuation of ASL III. It includes discussion of culturally significant topics related to the deaf community, more complex ASL grammatical features, and vocabulary building. Prerequisite: EDIS 3260 or consent of instructor.

EDIS 3950 (1 - 3)
Workshop on Current Topics
Intensive educational experience on selected topics related to skill development, content update, materials development. Typically, an all-day concentrated time format used. Requirements usually met within format. May
be repeated on approval of adviser. Graded.

EDIS 4100(3)
Third Year Field Experience
Fall, Spring. Maintaining healthy environments and using technology and classroom resources. Experience in special education classrooms. Prerequisites: EDIS 2310, and EDFI 3020 or EDFI 3030. C/F hrs.: 100. S/U.

EDIS 4110(3)
Phonics Instruction for Students with Special Needs
Fall, Spring. Systematic phonics instruction that promotes generalization to reading and writing, methods and materials to teach phonics as part of a comprehensive language arts program for students with special needs. Prerequisites: EDIS 2310, and EDFI 3020 or EDFI 3030. Graded. Extra fee.

EDIS 4120(3)
Content Literacy for Students with Special Needs
Fall, Spring. Teaching reading across curriculum for students with special needs at all grades. Selecting instructional materials, methods, intervention and study strategies, develop study guides, and modify testing procedures. Prerequisites: EDIS 2310, and EDFI 3020 or EDFI 3030. Graded. Extra fee.

EDIS 4210(3)
Assistive Technology in Special Education
Technology across special education spectrum. Content ranges from use of computers and various input and output devises to simple switches used to turn appliances on to increase the quality of life of persons with special needs. Prerequisites: EDIS 2310 or EDFI 3020 or EDFI 3030. C/F hrs.: 10. Registration priority given to majors in Mild/Moderate, Moderate/Intensive, Deaf/Hard of Hearing, Developmental Disabilities and Habilitation. Non-majors will be added through wait lists as space allows.

EDIS 4220(3)
Classroom Management
General classroom management, establishing rules, preventing behavior problems, maintaining positive environment, teaching social skills, conflict resolution, using classroom paraprofessionals, scheduling, and classroom design. Prerequisites: EDIS 2310 or EDIS 4350. C/F hrs.: 10. Registration priority given to majors in Mild/Moderate, Moderate/Intensive, Deaf/Hard of Hearing, Developmental Disabilities and Habilitation, Adapted Physical Education. Non-majors will be added through wait lists as space allows.

EDIS 4230(3)
Assessment of Young Children
Fall, Spring, Summer. Concepts and principles of measurement and instruments used in assessing young children and young children with special needs; integration of measurement and instruction. Formal, informal methods of diagnosis, assessment, and monitoring progress in the areas of development. Prerequisites: EDFI 3010 or EDFI 3020. C/F hrs.: 30. Registration priority given to majors in Mild/Moderate, Moderate/Intensive, Deaf/Hard of Hearing, Developmental Disabilities and Habilitation. Non-majors will be added through wait lists as space allows.

EDIS 4240(3)
Assessment and Evaluation:
Skills needed for consultation and collaboration with both professionals and families including ethical practices, available services, and developing appropriate reports. Prerequisites: EDIS 2310 or EDIS 4350. C/F hrs.: 10. Registration priority given to majors in Mild/Moderate, Moderate/Intensive, Deaf/Hard of Hearing, Developmental Disabilities and Habilitation. Non-majors will be added through wait lists as space allows.

EDIS 4250(3)
Transitions and Students with Special Needs
Transitions from self-contained classes to general education classrooms, from one level of school to another, and from school to work. Issues, resources, techniques to make successful transitions. Prerequisites: EDIS 3100, EDIS 3910, or EDIS 4220. C/F hrs.: 10. Registration priority given to majors in Mild/Moderate, Moderate/Intensive, Deaf/Hard of Hearing, Developmental Disabilities and Habilitation. Non-majors will be added through wait lists as space allows.

EDIS 4260(3)
Assessment of Young Children
Fall, Spring, Summer. Concepts and principles of measurement and instruments used in assessing young children and young children with special needs; integration of measurement and instruction. Formal, informal methods of diagnosis, assessment, and monitoring progress in the areas of development. Prerequisites: EDFI 3010 or EDFI 3020. C/F hrs.: 10. Registration priority given to majors in Mild/Moderate, Moderate/Intensive, Deaf/Hard of Hearing, Developmental Disabilities and Habilitation. Non-majors will be added through wait lists as space allows.

EDIS 4270(3)
Transitions and Students with Special Needs
Transitions from self-contained classes to general education classrooms, from one level of school to another, and from school to work. Issues, resources, techniques to make successful transitions. Prerequisites: EDIS 3100, EDIS 3910, or EDIS 4220. C/F hrs.: 10. Registration priority given to majors in Mild/Moderate, Moderate/Intensive, Deaf/Hard of Hearing, Developmental Disabilities and Habilitation. Non-majors will be added through wait lists as space allows.

EDIS 4280(3)
Assessment of Young Children
Fall, Spring, Summer. Concepts and principles of measurement and instruments used in assessing young children and young children with special needs; integration of measurement and instruction. Formal, informal methods of diagnosis, assessment, and monitoring progress in the areas of development. Prerequisites: EDFI 3010 or EDFI 3020. C/F hrs.: 30. Registration priority given to majors in Mild/Moderate, Moderate/Intensive, Deaf/Hard of Hearing, Developmental Disabilities and Habilitation. Non-majors will be added through wait lists as space allows.

EDIS 4310(3)
Nature and Characteristics of Learners with Special Needs
The nature and characteristics of students with special needs; models, theories, and philosophies on which special education practices have been based; and legal issues in definitions and identification of disabilities and regulations regarding assessment and IEPs. Prerequisites: EDIS 2310. Graded.

EDIS 4320(3)
Young Children with Disabilities: Risk Factors and Disabilities
Fall, Spring. Etiology, characteristics, classifications, and implications of common disabilities in young children. Also includes multi-factored evaluation, eligibility for special education services, service delivery models, and individualized education/intervention plans. Prerequisite: HDFS 2210.

EDIS 4330(3)
Applied Behavior Analysis
Intervening in a behavior problem and ethical concerns, crisis intervention, creating and maintaining records, designing a behavior intervention program, identifying realistic expectations, and using assessment instruments. Prerequisites: EDIS 2210. C/F hrs.: 10. Registration priority given to majors in Mild/Moderate, Moderate/Intensive, Deaf/Hard of Hearing, Developmental Disabilities and Habilitation. Non-majors will be added through wait lists as space allows.

EDIS 4340(3)
Technology across special education spectrum. Content ranges from use of computers and various input and output devises to simple switches used to turn appliances on to increase the quality of life of persons with special needs. Prerequisites: EDIS 2310 or EDFI 3020 or EDFI 3030. C/F hrs.: 10. Registration priority given to majors in Mild/Moderate, Moderate/Intensive, Deaf/Hard of Hearing, Developmental Disabilities and Habilitation. Non-majors will be added through wait lists as space allows.

EDIS 4350(3)
Consultation and Collaboration with Colleagues and Families
Skills needed for consultation and collaboration with both professionals and families including ethical practices, available services, and developing appropriate reports. Prerequisites: EDIS 2310 or EDIS 4350. C/F hrs.: 10. Registration priority given to majors in Mild/Moderate, Moderate/Intensive, Deaf/Hard of Hearing, Developmental Disabilities and Habilitation, Adapted Physical Education. Non-majors will be added through wait lists as space allows.

EDIS 4360(3)
Consultation and Collaboration with Colleagues and Families
Skills needed for consultation and collaboration with both professionals and families including ethical practices, available services, and developing appropriate reports. Prerequisites: EDIS 2310 or EDIS 4350. C/F hrs.: 10. Registration priority given to majors in Mild/Moderate, Moderate/Intensive, Deaf/Hard of Hearing, Developmental Disabilities and Habilitation. Non-majors will be added through wait lists as space allows.

EDIS 4370(3)
Consultation and Collaboration with Colleagues and Families
Skills needed for consultation and collaboration with both professionals and families including ethical practices, available services, and developing appropriate reports. Prerequisites: EDIS 2310 or EDIS 4350. C/F hrs.: 10. Registration priority given to majors in Mild/Moderate, Moderate/Intensive, Deaf/Hard of Hearing, Developmental Disabilities and Habilitation. Non-majors will be added through wait lists as space allows.

EDIS 4380(3)
Consultation and Collaboration with Colleagues and Families
Skills needed for consultation and collaboration with both professionals and families including ethical practices, available services, and developing appropriate reports. Prerequisites: EDIS 2310 or EDIS 4350. C/F hrs.: 10. Registration priority given to majors in Mild/Moderate, Moderate/Intensive, Deaf/Hard of Hearing, Developmental Disabilities and Habilitation. Non-majors will be added through wait lists as space allows.
EDIS 4410(3)
Reading and Writing Instruction for Students with Special Needs
Fall, Spring. Methods, materials for teaching reading/writing to students with special needs. Prerequisites: Senior status, must be taken as part of Methods Block for Mild-Moderate or Moderate-Intensive Intervention Specialist, GPA of 2.75 or better or department permission. Graded. Extra fee.

EDIS 4420(3)
Reading and Writing Diagnosis and Assessment for Students with Special Needs
Fall, Spring. Formal, informal methods of diagnosis, assessment, and monitoring progress in the areas of reading and writing. Prerequisites: Senior status, taken as part of the Methods Block for Mild-Moderate or Moderate-Intensive Intervention Specialist, GPA of 2.75 or better or department permission. Graded. Extra fee.

EDIS 4440(3)
Adapting Curriculum and Instruction for Students with Special Needs
Fall, Spring. Ways to adapt instruction and materials for students with special needs. Prerequisites: Senior status, taken as part of the Methods Block for Mild-Moderate, Moderate-Intensive or Deaf/Hard of Hearing Intervention Specialist, GPA of 2.75 or better or department permission. Extra fee.

EDIS 4450(3)
Math, Social Studies, and Science Instruction for Students with Special Needs
Fall, Spring. Methods and materials for math, social studies and science instruction. Prerequisites: Senior status, taken as part of the Methods Block for Moderate-Moderate, Moderate-Intensive or Deaf/Hard of Hearing Intervention Specialist, GPA of 2.75 or better or department permission. Extra fee.

EDIS 4460(3)
Physical and Medical Management
Spring. Physical and medical management of students with moderate-intensive needs. Toileting, wheelchair care and management, positioning, medication issues. Prerequisites: Moderate-Intensive Intervention Specialist, GPA of 2.75 or better or department permission. Graded.

EDIS 4470(3)
Adapting Curriculum for Students with Moderate to Intensive Special Needs
Fall. Adapting the curriculum to meet the requirements of students with moderate-intensive needs (life skills, job skills, leisure pursuits). Prerequisites: Moderate-Intensive Intervention Specialist; GPA 2.75. Graded.

EDIS 4480(3)
Implementing Inclusive Environments
Fall, Spring. Knowledge and skills involved in arranging the physical, social, and instructional environments to enhance the development and learning of young children with disabilities (birth through age eight) in inclusive early childhood programs. Prerequisite: EDIS 4350 or EMS 4330, or consent of instructor.

EDIS 4590(3)
Introduction to Manually Coded English
Spring. Introduction to manual English, sign systems and processes. Development of basic sign skills for classroom use. Registration priority given to majors in Mild/Moderate, Moderate/Intensive, Deaf/Hard of Hearing, Developmental Disabilities and Habilitation. Non-majors will be added through wait lists as space allows. Extra fee.

EDIS 4600(3)
Instruction through Manually Coded English: Classroom Techniques and Applications
Fall. Investigation of manual English in classroom use, implementation procedures and implications for older students and subject matter instruction and use by parents. Development of advanced skills in manually coded English. Prerequisites: EDIS 4590 or consent of instructor. Registration priority given to majors in Mild/Moderate, Moderate/Intensive, Deaf/Hard of Hearing, Developmental Disabilities and Habilitation. Non-majors will be added through wait lists as space allows.

EDIS 4640(3)
Curriculum Design for Students who are Deaf/Hard of Hearing
Fall. Methods for adapting instructional procedures, materials and evaluation to meet the unique visual and communication requirements of students who are D/HH; lesson planning, integrated curriculum design, and IEPs. In conjunction with a practicum experience in a public school classroom. Prerequisite: EDIS 4430.

EDIS 4650(3)
Math, Social Studies, and Science Instruction for Students with Special Needs
Fall, Spring. Formal, informal methods of diagnosis, assessment, and monitoring progress in the areas of reading and writing. Prerequisites: Senior status, taken as part of the Methods Block for Mild-Moderate or Moderate-Intensive Intervention Specialist, GPA of 2.75 or better or department permission. Graded. Extra fee.

EDIS 4660(3)
Reading and Writing Instruction for Students with Special Needs
Fall, Spring. Methods, materials for teaching reading/writing to students with special needs. Prerequisites: Senior status, must be taken as part of Methods Block for Mild-Moderate or Moderate-Intensive Intervention Specialist, GPA of 2.75 or better or department permission. Graded. Extra fee.

EDIS 4670(4)
Educational Audiology and Aural Rehabilitation for Students who are Deaf and Hard of Hearing

EDIS 4700(3)
Practicum with Students who are Deaf and Hard of Hearing
Fall. Observation of educational programs for students who are deaf and hard of hearing. Experience in tutoring, utilizing amplification and instructional media and developing/interpreting IEPs. Must be taken concurrently with EDIS 4640, EDIS 4650, EDIS 4660, EDIS 4670. Prerequisites: EDIS 2310, EDIS 4360.

EDIS 4820(3)
Practicum in Residential Settings
The course will prepare students to plan, develop, and maintain residential options for persons with developmental handicaps. The practicum hours will be spent in a residential setting. Prerequisite: EDIS 3100, EDIS 4230, Junior Standing, C/F hrs. 100. S/U.

EDIS 4830(8 - 16)
Internship in Developmental Disabilities and Habilitation
Supervised full-day experience within a setting related to the student’s academic specialization. Settings must be approved by the instructor. Prerequisite: EDIS 4820, senior standing, overall GPA of 2.5 or departmental permission. C/F hrs.: 320-640. Graded S/U.

EDIS 4850(3)
Job Coaching
Comprehensive review of job coaching and related services for individuals with disabilities. Identification of roles, functions and responsibilities of referral sources, job coaching practitioners, employers and clients. Practical applications and theoretical concepts will be addressed.

EDIS 4900(1 - 3)
Problems in Education
For advanced students wanting to conduct intensive study of selected problems in education. May be repeated to six hours; undergraduate credit only. Prerequisite: Consent of department.

EDIS 4920(1 - 16)
Teaching Internship for Intervention Specialists
The internship will feature 16 weeks in one or two classes for students with special needs. Interns will be expected to successfully put into practice the knowledge and skills they have been learning and practicing in previous classes and field experiences with the guidance of a mentor teacher and a university supervisor. Prerequisite: EDIS 4400, EDIS 4410, EDIS 4420. C/F hrs: 300. Extra fee.

Subject: Educational Teaching & Learning
EDTL 2020(2)
Contemporary Perspectives on Teaching in the Middle Grades
This course will provide the students with their first specific introduction to middle childhood philosophy with a focus on urban education. This two-credit course will include a field experience in classrooms utilizing middle school philosophy. (2) Prerequisite: EDHD 2010. C/F Hrs.: 20. MCE. Extra fee. Transportation required.

EDTL 2040(3)
Foundations of Early Childhood Education
Fall, Spring. This course is an introduction to early childhood education emphasizing the teaching of young children in schools with diverse populations. The course explores historical, social and philosophical foundations of early childhood education. Field-based course. Transportation required. Prerequisite: EDHD 2010 with letter grade of C or better. Pre-early childhood majors only. C/F hours: 21.

EDTL 2290(3)
Introduction to the Teaching and Learning of Foreign Languages
Spring. This course introduces students to pre-K-12 foreign language instruction. It focuses on understanding the nature of language, language learning, language teaching, and the preparation of language teachers and includes an early observation experience in a pre-K-8 foreign language classroom. Prerequisite: EDHD 2010. Transportation required.

EDTL 2300(2)
Introduction to Educational Technology
Fall, Spring, Summer. The course addresses effectively identifying, locating, evaluating, designing, preparing and efficiently using educational technology as an instructional resource in the classroom as related to principles of learning and teaching. Candidates will develop increased classroom communication abilities through lectures, discussions, modeling, laboratory experiences and completion of a comprehensive project. Extra fee.

EDTL 2420(3)
Introduction to Reading and Literacy for the Middle Grades
Fall, Spring. An introductory course in understanding reading and writing processes, cultural and linguistic diversity, and the integration of the six language arts. Prerequisite: EDHD 2010.

EDTL 2710(3)
Introduction to the Teaching of the Integrated Language Arts (ILA)
This course provides students with an introduction to teaching secondary (grades 7-12) English Language Arts. It focuses on understanding the integrated structure of the English Language Arts. Key concepts include: organizational structure, curriculum standards, inquiry, and technology. This course includes classroom observations in a field site. Prerequisite: EDHD 2010. Transportation required.

EDTL 2740(3)
Introduction to Secondary Mathematics
Review of content typically taught in the secondary mathematics curriculum, including topics from algebra, geometry, trigonometry, statistics/probability, and discrete mathematics. An introduction to state and national Standards in mathematics, including mathematical process skills, inquiry through the use of hands on materials, and current instructional technology. Includes observations at a field site. Prerequisites: EDHD 2010, “C” or higher in MATH 1310 and at least 30 completed semester hours. Transportation required.

EDTL 2750(3)
Introduction to the Teaching of Science
This course provides students with an introduction to the middle school, junior high school, and high school organizational and curricular issues in the specific discipline. It focuses on understanding the interrelated
nature of the sciences as well as individual science courses. Key concepts in science education will be addressed such as organizational structure, curriculum standards, inquiry, and science/technology. This course will include observations in classrooms. Prerequisite: EDHD 2010. Transportation required.

EDTL 2760(3)
Introduction to the Teaching of Social Studies
This course provides students with an introduction to curricular issues across all grade levels in the specific discipline. It focuses on understanding the interrelated nature of the social sciences as well as individual social science courses. Key concepts in social studies education will be addressed such as organizational structure, curriculum standards, inquiry, and social science/technology. This course will include observations in classroom settings. Prerequisite: EDHD 2010. Transportation required.

EDTL 3010(3)
Phonics, Fluency, and Word Study
Phonics and a systematic approach to its teaching, assessment, and intervention with middle grade learners. From a base of language development, the course examines phonics, structural analysis, and other word recognition strategies as tools for reading fluency. Word study and spelling across the curriculum are addressed. Prerequisite: EDFI 3030. (Credit not given for more than one of EDTL 300, EDTL 3010, and EDTL 3110.)

EDTL 3020(3)
Computer Utilization for the Middle Childhood Teacher
Fall, Spring. Appropriate practices in integrating computer technologies in the middle childhood curriculum. From theoretical perspectives to developmentally appropriate materials, instructional approaches and strategies for teaching all middle learners are explored. Must be taken as part of Field Block II. Transportation required. Prerequisite: admission to early childhood education program. Extra fee.

EDTL 3030(3)
Computer Utilization for the Early Childhood Teacher
Fall, Spring, Summer. Developmentally appropriate practices in integrating computer technologies in the early childhood curriculum. Evaluation of digital resources, including software for early childhood classrooms and assistive technologies. Exploration and critical analysis of issues related to digital technologies in education. Prerequisites: EDTL 2300; EDFI 3020 or EDFI 3030 and Junior standing. Prerequisite or corequisite: EDTL 3400. Credit not given for more than one of EDTL 3020, EDTL 3030, or EDTL 4670. Extra fee.

EDTL 3100(3)
Literacy for Young Learners
Fall, Spring. This course examines literacy development from pre-kindergarten through the primary grades. From theoretical perspectives to developmentally appropriate materials, instructional approaches and strategies for teaching all young learners are explored. Must be taken as part of Field Block I. Transportation required. Prerequisite: admission to early childhood education program. Extra fee.

EDTL 3110(3)
Phonics, Word Recognition, and Language Skills for Young Children
Fall, Spring. Phonics and a systematic approach to its teaching, assessment, and intervention for all young children are examined in this class. From a base of language development, phonemic awareness, phonics, word recognition, and word study are addressed with connections to spelling and vocabulary acquisition. Must be taken as part of ECE Field Block I. Transportation required. Prerequisites: admission to early childhood education program. Extra fee.

EDTL 3200(3)
Kindergarten-Grade 3 Practicum
Fall, Spring. This course examines planning, teaching, management, and professionalism for early childhood education. The course includes an intensive field experience in a kindergarten or primary grade classroom. Must be taken as part of ECE Field Block II. Transportation required. Prerequisite: Letter grades of C or better in all Field Block I courses (HDFS 3200, HDFS 4200, EDIS 4290, EDTL 3100, and EDTL 3110). Graded S/U. Extra fee.

EDTL 3220(3)
Literacy Across the Early Childhood Curriculum
Fall, Spring. This course examines developing oral and written language abilities in young children through age-appropriate, integrated curriculum. Approaches, teaching strategies, and resources for language learning through reading, writing, speaking, listening, viewing and visual representation are covered. Must be taken as part of ECE Field Block II. Transportation required. Prerequisite: Letter grades of C or better in all Field Block I courses (HDFS 3200, HDFS 4200, EDIS 4290, EDTL 3100, and EDTL 3110). Extra fee.

EDTL 3230(3)
Early Childhood Mathematics Methods
Fall, Spring. This course explores teaching contemporary mathematics in pre-kindergarten-grade 3. Objectives, curriculum, materials for instruction, methods of teaching, and assessment are discussed. Must be taken as part of ECE Field Block II. Transportation required. Prerequisite: Letter grades of C or better in all Field Block I courses (HDFS 3200, HDFS 4200, EDIS 4290, EDTL 3100, and EDTL 3110). Extra fee.

EDTL 3240(3)
Science Methods for the Early Childhood Teacher
Fall and Spring. Concepts of teaching science in grades pre-k-grade 3 are covered in this course. Developmentally appropriate instruction in science, including early childhood science curriculum, materials, adapting curriculum for diverse populations, inquiry based pedagogy, science safety, and Ohio's Academic Content Standards for Science, and multiple methods evaluation are examined. Must be taken as part of ECE Field Block II. Transportation required. Prerequisite: Letter grade of C or better in all Field Block I courses (HDFS 3200, HDFS 4200, EDIS 4290, EDTL 3100, and EDTL 3110). Extra fee.

EDTL 3250(3)
Social Studies Methods for the Early Childhood Teacher
Fall, Spring. This course explores objectives, content learning experiences, instructional resources, cooperative learning, reflective teaching and learning for all children in pre-kindergarten to grade 3 classrooms. Must be taken as part of ECE Field Block II. Transportation required. Prerequisite: Letter grades of C or better in all Field Block I courses (HDFS 3200, HDFS 4200, EDIS 4290, EDTL 3100, and EDTL 3110). Extra fee.
EDTL 3260(3)
Literacy Assessment in the Early Childhood Education Classroom
Fall, Spring. This course is an investigation of the role of classroom assessment in instructional decision-making and student learning. It provides an in-depth study of various formal and informal literacy assessment tools that are appropriate to use in early childhood classrooms. Must be taken as part of ECE Field Block II. Transportation required. Prerequisite: Letter grades of C or better in all Field Block I courses (HDFS 3200, HDFS 4200, EDIS 4290, EDTL 3100, and EDTL 3110).

EDTL 3400(3)
Teaching for the Middle Grades
Fall, Spring. Planning, teaching, management, and professionalism for middle grade teachers. Prerequisites: Admission to Middle Childhood Program; 2.8 GPA. Prerequisite or corequisite: EDTL 3020. Must obtain a minimum grade of C prior to EDTL 4920. Extra fee.

EDTL 3410(3)
Content Literacy for Middle Childhood Educators
Teaching literacy across the curriculum, grades 4-9. Evaluating texts, student reading ability, and comprehension. Integrating reading with writing to learn. Instruction, intervention, and assessment strategies. Prerequisite: C grade or better in EDTL 300 or EDTL 3010; Corequisite: EDTL 3400. Transportation required. Extra fee.

EDTL 3430(3)
Applied Literacy Assessment for the Middle Childhood Classroom
Fall, Spring. Applying literacy techniques to middle childhood classrooms and educational settings. From theoretical perspectives to materials, techniques, and tools. Using assessments to plan instruction. Transportation required. Prerequisite or Corequisite: EDTL 3410.

EDTL 3450(3)
Mathematics Instruction for the Middle Childhood Educator
Fall, Spring, Summer. Teaching contemporary mathematics in grades 4-9. Objectives, curriculum, materials for instruction, methods of teaching, and assessment. Must complete prior to EDTL 3460 and EDTL 4920.

EDTL 3460(3)
Investigations in Mathematics for the Middle Childhood Teacher
Fall, Spring, Summer. Research in mathematics education for the middle grades. Curricular and instructional trends, national and state models, team teaching, use of technology. Must obtain minimum grade of C prior to EDTL 4920. Transportation required. Prerequisites: "C" or better in MATH 4150 and EDTL 3450; admission to middle childhood program. C/F hrs.: 30. Extra fee.

EDTL 3470(3)
Social Studies Methods for the Middle Childhood Educator
Fall, Spring. Teaching social studies in grades 4-9. Objectives, curriculum, materials, evaluation, and instruction, including teaming and adaptations for diverse learners. Methods Block Practicum. Must obtain a minimum grade of C prior to EDTL 4920. Transportation required. Prerequisite: admission to middle childhood program. Extra fee.

EDTL 3480(3)
Science Methods for the Middle Childhood Teacher
Fall, Spring. Teaching science in grades 4-9. Objectives, curriculum, materials, evaluation, and instruction, including teaming and adaptations for diverse learners. Methods Block Practicum. Must obtain a minimum grade of C prior to EDTL 4920. Transportation required. Prerequisite: admission to middle childhood program. Extra fee.

EDTL 3490(3)
Social Studies for the Middle Childhood Teacher
Fall, Spring. Objectives, content learning experiences, instructional resources, teaming, evaluation of teaching, learning in the classroom. Methods Block Practicum. Must obtain a minimum grade of C prior to EDTL 4920. Prerequisite: admission to middle childhood program. Extra fee.

EDTL 3500(3)
Teaching about Ohio & the Americas: Content & Pedagogy in the Intermediate Social Studies Classroom
Prepares educators in content and methods related to teaching about Ohio and North America, and provides learners with the opportunity to enhance their social studies knowledge and skills in meeting the needs of students in the intermediate (grades 4 & 5) classroom. The course is structured around (1) learning and teaching social studies objectives; and (2) fourth/fifth grade Ohio & North America content as identified in the Ohio Academic Content Standards. Prerequisites: Teacher licensure or department approval. Register in department.

EDTL 3510(3)
Social Studies Methods for the Intermediate Grades
This course is designed to prepare educators for teaching social studies and meeting the needs of children in the intermediate grades. The course is structured around the following concepts: (1) learning and teaching social studies objectives; (2) intermediate grade content identified in the Ohio Academic Content Standards; (3) diversity; (4) teaching and learning experiences; (5) instructional resources; and (6) evaluating teaching and learning in the social studies classroom. Prerequisites: Teacher licensure or department approval. Register in department.

EDTL 3700(3)
General Teaching Methods in Secondary Schools
Processes and issues that form the basis of instruction in all content areas; development of strategies and teacher behaviors associated with effective instruction. Prerequisites: attainment of 60 semester hours; accumulative GPA of at least 2.8; grade of C or better in IPC 1020, GSW 1120, EDHD 2010, EDPI 3020 or EDPI 3030; and either EDTL 2290, EDTL 2710, EDTL 2740, EDTL 2750, or EDTL 2760. Transportation required. Extra fee.

EDTL 3950(1-9)
Workshop on Current Topics
Intensive education experience on selected topics related to skill development, content update or materials development. Typically, an all-day or similar concentrated time format. Requirements usually completed within
time format. May enroll up to 9 hours. May be repeated with different titles. Requires consent of program coordinator. S/U only.

EDTL 4180(3)
Practicum in School Settings
Fall, Spring. Seminars and field experiences are designed to develop the knowledge, skills, and dispositions necessary for successful teaching. Focal areas include professionalism, effective teaching practices, classroom management, and professional development. Prerequisite: Admission into the Adolescent/Young Adult Methods Block, Foreign Language Methods Block, or Middle Childhood Methods Block. S/U only. Transportation required.

EDTL 4200(3)
Developmental Reading in the Content Areas
Fall, Spring. Orient the teacher to the developmental reading process as it applies to the various subject matter areas. Prerequisite: admission into the adolescent/young adult education methods block, or foreign language education methods block. No credit for EDTL 4200 if credit has already been earned for EDTL 4210 or EDTL 3410. Transportation required.

EDTL 4210(3)
Content Area Literacy
Fall, Spring. Orient preservice teachers in various content areas to the reading and writing process as applied across the curriculum. Prerequisites: Junior Standing and EDFI 3020 or EDFI 3030. No credit for EDTL 4210 if credit has already been earned for EDTL 4200 or EDTL 3410.

EDTL 4220(3)
Teaching Foreign Language Skills in the Schools
Fall. Advanced-level skills and abilities in teaching listening, speaking, reading and writing in foreign languages as applied to the K-12 curriculum, classroom management, testing and evaluation, individualized instruction and culture. If taken for graduate credit, a research paper is required. Prerequisites: EDTL 2290 and EDHD 2010. C/F hrs.: 40. Transportation required.

EDTL 4670(3)
Computer Utilization in the Classroom
Fall, Spring. Impact of the computer on educational methods and applications in the classroom. Evaluation of software. Integration of the computer and associated technologies into the content areas. Prerequisites: EDTL 2300 and admission to Adolescent/Young Adult Education methods block or Foreign Language Education methods block. Grade of "C" or better required. Transportation required. Extra fee.

EDTL 4710(3)
Language Arts in Secondary Schools
Fall, Spring. Philosophies of experiences in teaching English in secondary schools. Prerequisites: admission into the adolescent/young adult methods block. ENG 3800 and ENG 3810. Grade of C or better required. C/F hours: 40. Transportation required. Extra fee.

EDTL 4740(3)
Mathematics in Secondary Schools
Fall, Spring. Principles, objectives, curriculum, materials and methods of teaching mathematics in secondary schools. Prerequisite: admission into the adolescent/young adult education methods block. Grade of C or better required. C/F hrs.: 40. Transportation required. Extra fee.

EDTL 4750(3)
Science in Secondary Schools
Fall, Spring. Principles, objectives, curriculum, instructional and resource materials, and methods of teaching science in secondary schools. Prerequisite: admission into the adolescent/young adult education methods block. Grade of C or better required. C/F hrs.: 40. Transportation required. Extra fee.

EDTL 4760(3)
Social Studies in Secondary Schools
Fall, Spring. Principles, objectives, curriculum, instructional and resource materials, and methods of teaching social studies in secondary schools. Prerequisite: admission into the adolescent/young adult education methods block. Grade of C or better required. C/F hrs.: 40. Transportation required. Extra fee.

EDTL 4800(3)
Professional Skills for the Early Childhood Educator
Fall, Spring. This is a professional course to support reflectivity and develop the emerging skills of student teachers. Included topics are classroom decision-making, collaboration, and advocacy within the framework of legal and organizational perspectives. Students participate in health and safety sessions on child abuse, communicable diseases, first aid, and CPR. Must be taken with EDTL 4910 (14 hrs.) or both EDTL 4910 (7 hrs.) and HDFS 4910 (7 hrs.). Prerequisite: Completion of Field Block I and II with a C or better in graded coursework and an S in S/U coursework. Graded S/U. Transportation required.

EDTL 4810(3)
Advanced Seminar in the Teaching of Integrated Language Arts
This course will focus on reflections from field experiences, advanced lesson planning, PRAXIS III preparation, the effects of teaching on student learning, and advanced topics in Language arts and Literacy education. Corequisite: EDTL 4970. Must have transportation. Extra fee.

EDTL 4840(3)
Advanced Seminar in Mathematics Teaching
This course will focus on reflections from field experiences, advanced lesson planning, PRAXIS III preparation, the effects of teaching on student learning, and advanced topics in mathematics education. Corequisite: EDTL 4970. Must have transportation. Extra fee.

EDTL 4850(3)
Advanced Seminar in Science Teaching
This course will focus on reflections from field experiences, advanced lesson planning, PRAXIS III preparation, the effects of teaching on student learning, and advanced topics in science education. Corequisite: EDTL 4970. Must have transportation. Extra fee.
EDTL 4860(3)
Advanced Seminar in Social Studies Teaching
This course will focus on reflections from field experiences, advanced lesson planning, PRAXIS III preparation, the effects of teaching on student learning, and advanced topics in social studies. Corequisite: EDTL 4970. Must have transportation. Extra fee.

EDTL 4890(3)
Advanced Seminar in Foreign Language Teaching
Spring. This course will focus on reflections from field experiences, advanced lesson planning, PRAXIS III preparation, the effects of teaching on student learning, and advanced topics in foreign language education. Corequisite: EDTL 4970. Must have transportation. Extra fee.

EDTL 4900(1 - 3)
Problems in Education
On Demand. For student wanting to conduct intensive study of selected programs in education. May repeat up to nine hours under different titles. Undergraduate credit only. Prerequisite: Consent of Department. C/F hrs.: 20.

EDTL 4910(1 - 16)
Early Childhood Teaching Internship
Fall, Spring. Classroom teaching in kindergarten or primary grades under supervision on full-day basis. Student follows calendar and hours of assigned school. College/program eligibility requirements must be met. Transportation required. C/F hours: 40 hours per week. May be repeated. Graded S/U. Extra fee. Co-requisite: EDTL 4800.

EDTL 4920(1 - 16)
Middle Childhood Teaching Internship
Fall, Spring. Classroom teaching in middle grades under supervision on full-day basis. Student follows calendar and hours of assigned school. College/program eligibility requirements must be met. Transportation required. C/F hours: 40 hours per week. May be repeated. Graded S/U. Extra fee. Co-requisite: EDTL 4930.

EDTL 4930(3)
Student Teaching Seminar for Middle Childhood Educators
Fall, Spring. A forum for discussing and reflecting on the student teaching internship. Topics include advanced lesson planning and instruction; effect on student learning; classroom management; Praxis III preparation; and transitioning to a professional career. Corequisite: EDTL 4920. Transportation required.

EDTL 4970(1 - 16)
Teaching Internship
Fall, Spring. Classroom teaching in foreign language or secondary school settings under supervision on full-day basis. Student follows calendar and hours of assigned school. College/program eligibility requirements must be met. Transportation required. C/F hours: 40 hours per week. May be repeated. Graded S/U. Extra fee. Co-requisite: EDTL 4810, 4840, 4850, 4860, or 4890.

Subject: English
ENG 99(0)
Creative Writing Common Time
Fall, Spring. Restricted to, and required of, all creative writing majors and minors. Successful completion of course requires attendance at scheduled one-hour common time each week. Must complete four semesters. No prerequisites. Graded S/U.

ENG 1000(3)
ESL Academic Composition I
Fall or Spring. Develops intermediate skills in reading and writing academic American English. Emphasis is on sentence-level and paragraph-level writing. Placement is on the basis of proficiency examination. No more than three hours from English 1000 or English 1010 may be applied toward graduation.

ENG 1010(3)
ESL Academic Composition II
Fall or Spring. Develops high-intermediate skills in reading and writing academic American English. Emphasis is on essay-level writing. Placement is on the basis of proficiency examination or completion of ENG 1000. No more than three hours from English 1000 or English 1010 may be applied toward graduation.

ENG 1030(3)
ESL Academic Oral/Aural Communication Skills I
Students placed in this class focus on pronunciation: individual consonants and vowels, word and sentence stress, intonation, and rhythm. Focus is also placed on building vocabulary, developing presentation skills, and building overall fluency. Some emphasis is placed on strategies for comprehending both formal and informal English and on note-taking. This course may be helpful for World English speakers who are fluent speakers of English, but whose accents significantly impede comprehension. 70% of class time focuses on pronunciation; 30% on fluency practice. Graded S/NC.

ENG 1040(3)
ESL Academic Oral/Aural Communication Skills II
Students placed in this class still need some work on pronunciation (consonants and vowels, word and sentence stress, intonation, rhythm), but more focus is on overall fluency and the ability to give effective oral presentations and lead group discussions. Focus is also placed on listening to academic lectures and on a developed ability to take notes. World English speakers who have a somewhat impeding accent and who could work on presentation skills may find this class the most useful. 70% of class time focuses on fluency practice; 30% on pronunciation. Graded S/NC.

ENG 1500(3)
Response to Literature
Fall, Spring. A general education course emphasizing discussion of humanistic themes based on student responses to readings in fiction, drama, poetry and nonfiction. Not accepted toward English major or minor. Prerequisite: enrollment in or completion of GSW 1110. Applicable to the BG Perspective (general education) humanities and arts requirement.

ENG 2000(2 - 3)
Writing about Literature
Fall, Spring. Various topics: Short Story, Literature and Film, Women in Literature, Literature of the Natural World. A general education course with emphasis on humanistic themes, basic literary concepts, and writing. Some topics for two hours, most for three. Can be repeated once if topics differ. Not accepted for English major or minor. Applicable to the BG Perspective (general education) humanities and arts requirement.

ENG 2010(3)
Introduction to Literature
Fall, Spring, Summer. Various thematic topics. Introduction to literary and textual study with attention to various forms of fiction, nonfiction, drama, poetry, and to essential literary terminology and practice. Extensive expository writing. Prerequisite for most 3000- and 4000-level ENG courses. Applicable to the BG Perspective (general education) humanities and arts requirement.

ENG 2040(3)
Imaginative Writing
Fall, Spring. Exploration of the creative process through reading and practice in various genres of imaginative writing, such as poetry, fiction, and drama, but not limited to these. Emphasis on the means by which students find artistic form for expression. Open to all students. Extra fee.

ENG 2050(3)
Craft of Poetry
Fall. The way poetry works, analysis of poetic form, theory and technique in traditional and contemporary works, emphasis on poetry writing exercises and revision. Required for majors in BFA creative writing program. Prerequisite: GSW 1120.

ENG 2060(3)
Craft of Fiction
Spring. The way fiction works, analysis of fictional form, theory and technique in traditional and contemporary works, emphasis on story writing exercises and fiction terminology. Required for majors in BFA creative writing program. Prerequisite: GSW 1120.

ENG 2070(3)
Intermediate Writing
Fall. Work on developing mastery of the rhetorical principles of planning, executing and revising prose. Emphasis on strengthening analytical writing, both expository and argumentative; valuable for writing on the job. Prerequisite: GSW 1120. Extra fee.

ENG 2090(3)
Creative Writing Workshop
Fall, Spring. Principles of poetic composition and fiction writing; analysis of contemporary models and group discussion of student's work. May be repeated once. Extra fee.

ENG 2110(3)
African-American Literature
Spring. African-American literature from the mid-eighteenth century to the present in its historical, political, and cultural context. Germane critical approaches to both literary modes and vernacular tradition. Applicable to the BG Perspective (general education) cultural diversity in the United States requirement.

ENG 2120(3)
Native American Literature
Fall. Native American literature from the oral to the written tradition in its historical and cultural context. Germane critical approaches to the tales, songs, myths, memoirs, poetry and fiction. Applicable to the BG Perspective (general education) cultural diversity in the United States requirement.

ENG 2610(3)
World Literature from Ancient Times to 1700
Fall, Spring, Summer. Works in English and in translation of various world literatures from ancient times to 1700, including a balanced selection of texts from European and non-European cultures such as Greek, Celtic, Roman, Chinese, Indian, African, Japanese, Arabic, etc. Applicable to the BG Perspective (general education) humanities and arts and international perspective requirements.

ENG 2620(3)
World Literature from 1700 to Present
Fall, Spring, Summer. Works in English and in translation of various world literatures from 1700 to the present, including a balanced selection of texts from European and non-European cultures such as French, Russian, Spanish, Latin American, Chinese, Indian, African, Caribbean, Japanese, Arabic, etc. Applicable to the BG Perspective (general education) humanities and arts and international perspective requirements.

ENG 2640(3)
British Literature Survey to 1660
Fall, Spring, Summer. Survey of British prose, poetry, and drama from Anglo-Saxon origins through the restoration of Charles II; emphasis on literary traditions and historical contexts. Applicable to the BG Perspective (general education) humanities and arts requirement.

ENG 2650(3)
British Literature Survey, 1660-1945
Fall, Spring, Summer. Survey of British prose, poetry, and drama from the Restoration period through the Second World War; emphasis on literary traditions and historical contexts. Applicable to the BG Perspective (general education) humanities and arts requirement.

ENG 2690(3)
Canadian Fiction
Spring, Summer. Short stories and novels by leading Canadian authors from English-speaking areas, emphasis on recent writers. Titles chosen to represent diversity of expression from various regions, with some attention to women's concerns as well as Native American, Eskimo, and ethnic views. Applicable to the BG Perspective (general education) humanities and arts and international perspective requirements.

ENG 2740(3)
Survey of American Literature to 1865
Fall, Spring, Summer. American literature from its beginnings through the Civil War. May emphasize historical
development and/or major themes. Applicable to the BG Perspective (general education) humanities and arts requirement.

ENG 2750(3)  
Survey of American Literature, 1865-1945  
Fall, Spring, Summer. American literature from the end of the Civil War through World War II. May emphasize historical development and/or major themes. Applicable to the BG Perspective (general education) humanities and arts requirement.

ENG 2850(3)  
Writing About Films  
Fall, Spring. Writing-intensive course treating film analysis, film reviews, film theory, and film adaptations. Prerequisite: GSW 1120. Extra fee.

ENG 2900(3)  
Language Study  
Spring. Aspects of form and style in language: structure, usage, semantics; language change and cultural convention; social and regional dialects. Prerequisite: sophomore standing. Not applicable for state certification requirements. Not a substitute for ENG 3800 requirement for English education. Applicable to the BG Perspective (general education) humanities and arts requirement.

ENG 3000(3)  
Interdisciplinary Studies in Literature  
Fall, Spring. Interdisciplinary or themed topics not offered under the department's other listings. Recent topics have included Imperialism, Women's Humor, Literature of Trauma, British Situation Comedy. Prerequisites: GSW 1120 or instructor's consent. May be repeated once if topics differ.

ENG 3010(3)  
Shakespeare  
Fall, Spring. Representative comedies, histories, tragedies, romances, and lyric poetry. Appropriate for students with no previous Shakespeare courses. Prerequisite: ENG 2010.

ENG 3020(3)  
Introduction to Literary Theory and Criticism  
Fall, Spring. General introduction to study of literary theory and criticism with attention to various schools of 20th century criticism, critical applications, and critical terminology. Extensive critical writing. Prerequisite: ENG 2010. Prerequisite for ENG 3100, ENG 3110, ENG 3140, and ENG 4560.

ENG 3060(3)  
The Bible  
Fall, Spring, Summer. The Bible as a literary classic; its development and influence on literary culture. Prerequisite: GSW 1120.

ENG 3100(3)  
Multiethnic American Literature  
Alternates with ENG 3110 and ENG 3140 in Fall, Spring, Summer. Modern and contemporary literatures by visibly ethnic American writers. Themes, literary genres, and germane critical approaches in a focus on intersections between cultures and texts. Prerequisites: ENG 3020 or ENG 2020.

ENG 3110(3)  
Gay and Lesbian Literature and Criticism  
Fall, Spring. Major issues in contemporary gay and lesbian literary criticism. Discussion of literature and critical writing that addresses gay and lesbian sexuality, with attention to feminist theory, cultural studies, psychoanalytic criticism, race, and class. Prerequisites: ENG 3020 or ENG 2020.

ENG 3120(3)  
Poetry Workshop  
Fall, Spring. Practical application of students' knowledge of how poems are put together. Class discussion and analysis of original and published poetry, and poetry exercises. Required for creative writing major. Prerequisites: ENG 2040, ENG 2050, ENG 2060, a B or better in ENG 2090 and approval of portfolio by the Creative Writing Program; or permission of instructor. May be repeated once. Extra fee.

ENG 3130(3)  
Fiction Workshop  
Fall, Spring. Practical application of students' knowledge of how stories are put together. Class discussion and analysis of original and published stories, and fiction exercises. Required for creative writing major. Prerequisites: ENG 2040, ENG 2050, ENG 2060, and a B or better in ENG 2090 and approval of portfolio by the Creative Writing Program; or permission of instructor. May be repeated once. Extra fee.

ENG 3140(3)  
Postcolonial Literature  
Spring. Introduction to writers from formerly colonized areas of the world, including Africa, Asia, and the Caribbean, among others. Emphasis on themes and issues related to imperialism, postcolonial identity, nationalism, and decolonization, with attention to intersections of race, gender, and sexuality. Prerequisite: ENG 3020 or ENG 2020.

ENG 3200(3)  
Modern Poetry  
Fall. English and American poetry and European poetry in translation from 1900 to 1945; writers and works significantly influencing development of poetic forms. Required for creative writing major. Prerequisites: any ENG literature course and GSW 1120.

ENG 3230(3)  
Modern Fiction  
Fall. Novelistic fiction from English, European (in translation), and American writers of the Modern period such as Flaubert, Joyce, Conrad, Woolf, Kafka, Mann, Faulkner. Focus on development of forms of fiction, styles, and narrative theories, and on cultural, literary, and political contexts of individual works. Prerequisites: any ENG literature course and GSW 1120.

ENG 3250(3)
Modern Drama
Fall. Dramatic works by British, European (in translation), and American writers of the Modern period such as Shaw, Ibsen, Chekhov, O'Casey, Anouilh, Giradoux, Brecht, O'Neill, with a focus on dramatic movements and theatrical innovations as well as the cultural, aesthetic, literary, and political contexts of individual works. Prerequisites: any ENG literature course and GSW 1120.

ENG 3300(3)
Contemporary Poetry
Spring. Cross section of English and American poetry and European poetry in translation, mostly written since 1945; writers and works representing major trends in development of poetry. Required for creative writing major. Prerequisites: any ENG literature course and GSW 1120.

ENG 3330(3)
Contemporary Fiction
Spring. Fiction by British, European (in translation), and American writers of the contemporary period (since 1945) such as Amis, Pynchon, Duras, Rushdie, Selvon; Naipul, Bradbury, Marquez. Focus on development of forms of fiction, styles, and narrative theories, and on cultural, literary, and political contexts of individual works. Prerequisites: any ENG literature course and GSW 1120.

ENG 3350(3)
Contemporary Drama
Spring. Dramatic works by British, European (in translation), and American writers of the contemporary period (since 1945) such as Arden, Friel, Stoppard, Deveare Smith, Shange, Valdez. Focus on dramatic movements and theatrical innovations, as well as the cultural, aesthetic, literary, and political contexts of individual works. Prerequisites: any ENG literature course and GSW 1120.

ENG 3420(3)
Literature for Young Children
Fall, Spring, Summer. Reading and evaluation of books for children from birth through age 8; picture books, novels, folklore, informational literature, poetry, and bibliographic sources. Priority given to ECE and EDIS majors. Does not count for Arts and Humanities literature requirement. Prerequisite: GSW 1120.

ENG 3440(3)
Literature for the Middle Child
Fall, Spring. Reading and evaluation of books for 4th-9th grade; fiction, nonfiction, poetry, picture books, and bibliographic resources. Prerequisite: GSW 1120. Priority given to Middle Childhood and EDIS majors. Not applicable to the College of Arts & Sciences literature requirement in Group V: Arts & Humanities.

ENG 3450(3)
Literature for Adolescents
Fall, Spring. Reading and evaluation of books for 7th - 12th grade; fiction, non-fiction, poetry, and bibliographic sources. Prerequisite: GSW 1120. Priority given to ILA and EDIS majors. Does not count for Arts and Humanities literature requirement.

ENG 3800(3)
Linguistics for English Teachers
Fall, Spring. Structure of English through recent linguistic theories related to topics of interest to educators (dialects, register, style, etc.). Attention to syntax and morphology as well as to linguistics systems. Prerequisite: sophomore standing.

ENG 3810(3)
Grammar and Writing
Fall, Spring. Application of grammatical models (traditional, structural and transformational) to the teaching of writing.

ENG 3850(3)
Studies in Literature-Film
On demand. Problems in film's relationship to literature; definitions and theory; specific films and literary works. May focus on author, genre or historical period. May be repeated once if topics differ. Prerequisite: GSW 1120. Extra fee.

ENG 3870(3)
Literary Editing and Publishing
Practical experience in literary publishing through work on Prairie Margins, the campus literary journal. Students will solicit and evaluate work for publication, and then will gain practical experience in editing, layout, and production of the journal, as well as in publicizing and promoting the finished product. Includes introduction to the larger literary market, and instruction in preparing creative work for submission and publication. May be repeated once.

ENG 3880(3)
Introductory Technical Writing
Fall, Spring. Application of basic forms of writing for business, industry, and government. Requires writing and revising a number of documents including instructions, definitions, descriptions, and reports. Prerequisite: junior standing. Extra fee.

ENG 3890(3)
Professional Editing
Fall, Spring. Editing technical, scientific, and other professional documents such as proposals, reports, journal articles, conference proceedings, and books. Includes introduction to managing editorial services. Prerequisites: junior standing or permission of instructor. Extra fee.

ENG 4000(3)
Chaucer
On demand. The Canterbury Tales, Troilus and Criseyde, such dreamvision poems as the Book of the Duchess, and lyrics in Middle English. Prerequisite: ENG 2010.

ENG 4010(3)
Special Topics in Shakespeare and Criticism
On demand. In-depth analysis of Shakespeare's poetic and dramatic production from specific critical/theoretical perspectives. Prerequisite: ENG 3010.
ENG 4020(3)  
**English Medieval Literature**  
On demand. Poetry, prose, and drama including such works as Beowulf, Pearl, and the Wakefield plays, read in Old and Middle English. Prerequisite: ENG 2010.

ENG 4030(3)  
**16th and 17th Century Non-Dramatic Literature**  
On demand. In-depth analysis of the poetry and prose of early modern England, with special attention to English Petrarchanism, Spenserian epic, metaphysical poetry, the Cavalier tradition, and the controversial political and religious tracts of the period. Prerequisite: ENG 2010.

ENG 4060(3)  
**English Renaissance Drama**  
On demand. Renaissance dramatic forms and traditions exclusive of Shakespeare. May include representative authors (Marlowe, Jonson, Middleton, Webster) or genres (revenge tragedy, city comedy, domestic tragedy). Prerequisite: ENG 2010.

ENG 4080(3)  
**Milton**  

ENG 4100(3)  
**Topics in English Restoration Literature and Culture**  

ENG 4120(3)  
**Poet's Workshop**  
Fall, Spring. Focuses on developing the students' writing process and understanding of contemporary poetry. Prerequisite: B or better in ENG 3120 or ENG 3130 or instructor permission. May be repeated once. Extra fee.

ENG 4130(3)  
**Fiction Writer's Workshop**  
Fall, Spring. Focuses on developing the students' writing process and understanding of contemporary fiction. Prerequisite: B or better in ENG 3130 or ENG 3120 or instructor permission. May be repeated once. Extra fee.

ENG 4150(3)  
**Topics in 18th-Century British Literature and Culture**  
On demand. Poetry, fiction, drama, and prose from 1700 to 1800, including writers such as Defoe, Richardson, Fielding, Pope, Swift, Burney, Heywood, and Lennox. Emphasis on cultural developments (such as neoclassicism, capitalism, colonialism, the rise of the novel) and their effect on changing conceptions of class, family structure, gender, sexuality, and race in 18th-century Britain. Prerequisite: ENG 2010.

ENG 4160(3)  
**The Victorian Novel**  
On demand. Male and female novelists of the Victorian period (1837-1901), including the Brontës, Eliot, Dickens, Elizabeth Gaskell, Wilkie Collins, Hardy, and others. Emphasis on issues such as industrialization, imperialism, social/legal reform, crime and sensationalism, domesticity, and women's changing roles, as well as on the intersections of class, race, gender, and sexuality in Victorian Britain. Prerequisite: ENG 2010.

ENG 4170(3)  
**Topics in British Romanticism**  
On demand. Poetry, fiction, and drama by both male and female Romantic writers such as Wollstonecraft, Mary Shelley, Blake, Keats, Coleridge, Byron, Percy Shelley, Scott, and Ann Radcliffe. Emphasis on the historical and cultural contexts of British Romanticism. Topics may include the impact of revolution, the emergence of the Gothic, the Sublime, the Picturesque, and the rise of Orientalism/colonialism. Prerequisite: ENG 2010.

ENG 4180(3)  
**Victorian Poetry and Prose**  
On demand. Prose and poetry of the Victorian period, including such writers as Browning, Tennyson, Arnold, Elizabeth Barrett, Emily Bronte, and Christina and Dante Gabriel Rossetti. Prerequisite: ENG 2010.

ENG 4190(3)  
**Topics in Modern British Literature**  
On demand. Works in one or more genres from the modern period by English, Irish, Scottish, and Welsh writers such as Joyce, Yeats, Thomas, Woolf, and O'Casey. Topics may include theoretical, aesthetic, historical, cultural, and political issues of the period. Prerequisite: ENG 2010.

ENG 4200(3)  
**Topics in Contemporary British Literature**  
On demand. Works in one or more genres from the 1940s to the present by English, Irish, Scottish, Welsh, and immigrant writers of the British Isles. Topics may include theoretical, aesthetic, historical, cultural, and political issues of the period. Prerequisite: ENG 2010.

ENG 4230(3)  
**Women's Studies in Literature**  
On demand. Women as authors and subjects. Feminist critical approaches to literary works in a range of genres, cultural backgrounds, or historical periods. May be repeated once if topics differ. Prerequisite: ENG 2010.

ENG 4240(3)  
**Topics in Multiethnic American Literature**  
On demand. Literary works from all genres by writers from one ethnic American culture. In-depth study of significant texts placed in culturally specific contexts through the lens of appropriate multicultural theory. May be repeated once if topics differ. Prerequisite: ENG 2010.
On demand. Intensive study of an author, group of authors, genre, theme, period, or critical issue. Authors may include: Smith, Bradford, Rowlandson, Knight, Edwards, Franklin, Wheatley, Irving, and Cooper. Native-American myths and French/Spanish exploration narratives may also be treated. Prerequisite: ENG 2010.

ENG 4310(3)
**Topics in the American Renaissance**
On demand. Intensive study of an author, group of authors, genre, theme, period, or critical issue. Authors may include: Emerson, Thoreau, Fuller, Whitman, Dickinson, Douglass, Jacobs, Stowe, Poe, Hawthorne, and Melville. Prerequisite: ENG 2010.

ENG 4320(3)
**Topics in Late 19th-Century and Early 20th-Century American Literature**
On demand. Intensive study of an author, group of authors, genre, theme, period, or critical issue. Authors may include: Twain, Harper, Howells, Chesnutt, Crane, Norris, Alcott, Jewett, Winnemucca, James, and Chopin. Prerequisite: ENG 2010.

ENG 4330(3)
**Topics in Modern American Literature**
On demand. Intensive study of an author, group of authors, genre, theme, period, or critical issue. Authors may include: Eliot, Stieglitz, Hurston, Hemingway, Faulkner, Oates, Barnes, Wharton, Stevens, H.D., and Hughes. Prerequisite: ENG 2010.

ENG 4340(3)
**Topics in Contemporary American Literature**
On demand. Intensive study of an author, group of authors, genre, theme, period, or critical issue. Prerequisite: ENG 2010.

ENG 4420(3)
**Studies in Children's Literature**
Alternate years. Problems in children's literature; history, criticism, trends, individual authors, types. Prerequisite: ENG 3420 or permission of instructor.

ENG 4560(3)
**Topics in Critical Theory**
On demand. In-depth study of one or more literary/critical theories such as semiotic, psychoanalytic, Marxist, feminist, postcolonial. Prerequisite: ENG 3020 or ENG 2020.

ENG 4700(1 - 4)
**Directed Readings in Language and Literature**
Fall, Spring. For advanced student or small group of students to work independently in specialized subject not covered by existing courses. Prerequisites: junior standing; six hours of English beyond GSW 1120; written description of the proposal, prepared by student and signed by proposed instructor, to be submitted to undergraduate curriculum committee in English prior to end of preceding semester. May be repeated up to 6 hours.

ENG 4800(3)
**Topics in English Studies**
On demand. Intensive study of author, literary school, genre or theme. May be repeated once if topics differ. Prerequisite: ENG 2010 or permission of instructor.

ENG 4830(3)
**Advanced Composition**
Fall, Summer. Writing intensive course intended for students who want to develop their writing skills at an advanced level. Focus and subject matter will vary but rhetorical emphasis will guide the writing tasks and approaches. Prerequisite: Writing intensive course at the 2000 level or above in any department. Extra fee.

ENG 4840(3)
**Foundations of Teaching Writing**
Fall, Spring. Historical and contemporary traditions that have led to the pedagogy and theories of teaching writing to adolescents. This course offers specific material and practice in writing assessment, writing assignments, developing writing groups, peer assessment and information about process involved in teaching writing to adolescents. Prerequisite: Junior standing.

ENG 4850(3)
**Topics in Film Theory**
On demand. In-depth study of one or more film theories such as semiotic, psychoanalytic, genre, feminist. Prerequisite: ENG 2010. Extra fee.

ENG 4860(3)
**Writing Process for Online Documents**
Fall. Emphasis on theory, principles, and research about the writing process involved for online documents. Prerequisite: ENG 3880 or permission of instructor.

ENG 4870(3)
**Science and Medical Writing**
Emphasis on style, and genres of science and medical writing, including the media of print, television, and film. Focus on special stylistic concerns for professional and popular audiences of scientific communication. Prerequisite: ENG 3880 or permission of instructor.

ENG 4880(3)
**Advanced Technical Writing**
Advanced study of theory and research in documentation. Student produces a substantial portfolio-quality project. Prerequisite: ENG 3880 or permission of instructor. Extra fee.

ENG 4890(1 - 9)
**Internships in English Studies**
Fall, Spring, Summer. Work experience where technical communication/literature/creative writing students apply and practice the skills they have learned in their courses, and learn new skills from industry, business, and non-academic environments. Prerequisite: approved registration form. Graded S/U. May be repeated up to 9 hours for scientific & technical communication students. May be repeated up to 3 hours for
all literature and creative writing students.

ENG 4950(1 - 3)  
Workshop  
On demand. Intensive educational experience, directed readings, and supervised study on selected literary topics. Programmatic credit offered at discretion of program director. May be repeated up to six hours on approval of advisor.

ENG 4970(3)  
Senior BFA Thesis Workshop  
Fall, Spring. Students will produce a compilation of their works of fiction, poetry, or both, as well as a written critical introduction, to serve as the capstone artistic experience as a Creative Writing major, and to meet the thesis requirement for the degree. This course will also cover professional matters such as preparation of manuscripts for publication, graduate study, and career choices. Graded S/U. Required for all BFA creative writing majors in their final year.

ENG 4980(3)  
Senior Project Tutorial  
Fall, Spring. Students will produce a compilation of their works of fiction, poetry, or both, as well as a written critical introduction, to serve as the capstone artistic experience as a Creative Writing major, and to meet the thesis requirement for the degree. This course will also cover professional matters such as preparation of manuscripts for publication, graduate study, and career choices. Graded S/U. Required for all BFA creative writing majors in their final year.

ENG 4990(3)  
Senior Thesis Workshop  
Fall, Spring. Workshop on research techniques and writing designed to assist students to produce a scholarly essay of approximately 25 pages. Credit may not be received for both ENG 4980 and ENG 4990. 

Subject: Engineering Technology  
ENGT 1000(3)  
Introduction to Engineering Technology  
Fall, spring and summer. Selected applied research methods, technical processes and foundational principles relevant to the field of engineering technology, introduced systematically as a professional point of entry. One and one-half hour lecture and one three-hour laboratory per week. Extra fee.

ENGT 1100(3)  
Basic Computer-Aided Design  
Fall, Spring. Introduction to CAD-based application. Construction of two-dimensional engineering drawings using a CAD system, with an emphasis upon geometric construction, orthographic projection, dimensioning, basic pictorials, and presentation. One two-hour lecture and one two-hour laboratory per week. Prerequisite: High School Drafting or equivalent, or permission of instructor. Extra fee.

ENGT 2100(3)  
Solid Modeling  
Fall. Intermediate CAD course focusing on 3-D solid modeling and the conversion of these models into engineering detail drawings and assemblies. One two-hour lecture and one two-hour laboratory per week. Prerequisite: ENGT 1100 or permission of instructor. Extra fee.

ENGT 2150(3)  
Descriptive Geometry & Production Drawing  
Spring. Application of design analysis, concepts of descriptive geometry, and engineering graphics for design solutions. Developing working drawings with an emphasis on dimensioning, tolerancing and current ASME Standards for GD&T. One two-hour lecture and one two-hour laboratory per week. Prerequisite: ENGT 2100. Extra fee.

ENGT 2200(3)  
Metallic Materials and Processes  
Spring and on demand. A survey of metals and their hot and cold processing practices. Laboratory applications and techniques are studied. One and one-half hour of lecture and one three-hour laboratory per week. Prerequisites: ENGT 1000 or MFG 1120, MATH 1120 or higher. Extra fee.

ENGT 2300(3)  
Fluid Power Transmission  
Spring. Summer on demand. Pumps, motors, valves, circuits, applications of hydraulic and pneumatic power systems. Design, operation, maintenance of fluid power systems used in industry. Four hours of lecture and laboratory. Prerequisites: MATH 1120 or higher, ENGT 2200. Extra fee.

ENGT 2400(3)  
Statics and Strength of Materials  
Fall, Spring. Fundamentals of statics including vectors, centroids, moment of inertia, free body diagrams and structural systems. Strength of materials including simple and combined stress, bending, shear and torsional stress. One two-hour lecture and one two-hour laboratory per week. Prerequisite: MATH 1280 or MATH 1300 or MATH 1310 or MATH 1340 and MATH 1350 or permission of instructor. Extra fee.

ENGT 3000(3)  
Mechanical Design  
Spring. Engineering graphics and CAD principles applied to the design of components, assemblies, machines, and production systems. Selection and application of standard mechanical components. One two-hour lecture and one two-hour laboratory per week. Prerequisites: ENGT 2150 and ENGT 2200. Extra fee.

ENGT 3050(3)  
Technical Illustration  
Fall. Technical illustration for design presentation, assembly, repair and advertising manual graphics. A variety of equipment, materials and techniques to accomplish various pictorial representations and design illustrations; with a focus upon electronic media. One two-hour lecture and one two-hour laboratory per week. Prerequisite: ENGT 3000. Extra fee.

ENGT 3150(3)  
Three-Dimensional Parametric Modeling
Fall. Three-D Parametric Design techniques applied to part and assembly modeling and production drawings; including presentation design synthesis and rapid prototyping. One two-hour lecture and one two-hour laboratory per week. Prerequisite: ENGT 2150. Extra fee.

ENGT 3200(3)
CAM & Rapid Prototyping
Spring, summer on demand. Contemporary manufacturing processes in which the process of producing a newly designed product is expedited on Computer Aided Design/Computer Aided Manufacturing (CAD/CAM). Prerequisites: ENGT 2100. Extra fee.

ENGT 3400(3)
Properties and Testing of Engineering Materials
Mechanical properties and failure modes of engineering materials. Destructive and nondestructive testing of these materials. One two-hour lecture and one two-hour laboratory per week. Prerequisites: Matriculation in one of these majors: ENGT, ECT, CM&T, ARCH, DESN, EMST, or consent of instructor. Extra fee.

ENGT 3450(3)
Plastics and Composite Materials and Processes
Fall, Summer even years. Identification, properties, characteristics and selection of plastics and composite materials. Set-up and operation of primary and secondary plastics processing equipment. One two-hour lecture and one two-hour laboratory per week. Prerequisite: Matriculation in one of these majors: ENGT, ECT, CM&T, ARCH, DESN, EMST, IND, TECH, or consent of instructor. Extra fee.

ENGT 3500(3)
Metrology and GD & T
Focus on contemporary metrology instrumentation, practice with an emphasis on geometric dimensioning and tolerancing. Four hours of lecture and lab. Prerequisites: ENGT 2150, ENGT 2200.

ENGT 4000(3)
Advanced Modeling, Simulation and Analysis
Fall. Study and application of computer modeling systems using interactive methodologies for modeling, simulation and presentation analysis. One two-hour lecture and one two-hour laboratory per week. Prerequisites: ENGT 3000 and ENGT 3150. Extra fee.

ENGT 4500(3)
Design Methodologies
Spring. Systems approach applied to solution of product design problems; emphasis on feasibility of design solutions, manufacturability and consideration of assembly. One two-hour lecture and one two-hour laboratory per week. Prerequisite: ENGT 4000. Extra fee.

ENGT 4750(3)
Professional Development

Subject: Environmental Health
ENHV 1050(3)
Environmental Health Science
Interactions between human activities, health and environmental systems. Use of scientific method in defining and solving environmental health science problems. Laboratory emphasis on pollution measurement, effects and control. Two one-hour lectures and one two-hour laboratory. Credit not given for more than one of ENVH 1050 and BIOL 1010. Applicable to the BG Perspective (general education) natural sciences requirement. Extra fee.

ENHV 2100(3)
The Global Commons: International Perspectives on Environmental Health and Protection
An examination of environmental conditions throughout the world, and how culture affects response to and perceptions of environmental conditions. Applicable to the BG Perspective (general education) social sciences and international perspective requirements.

ENHV 3010(3)
Public Health and Sanitation
Assessment of public health in the community. Institutional inspection techniques, communicable disease control, solid waste disposal and prevention of food-borne disease. Three hours lecture.

ENHV 3020(3)
Industrial Hygiene
Basic concepts in recognition, evaluation and control of workplace hazards including chemical, physical and biologic stressors. Three hours lecture. Prerequisite: CHEM 1250.

ENHV 3030(1)
Industrial Hygiene Laboratory
Evaluation methods for chemical, noise, radiation and physical hazards in the workplace and environment. Three hours weekly. Corequisite: ENHV 3020. Major restricted or instructor's consent.

ENHV 3040(3)
Air Quality Management
Principles of air quality; pollution sources, effects and control strategies. Three hours lecture. Prerequisite: CHEM 1250.

ENHV 3050(1)
Air Quality Laboratory
Sampling and analysis methods in air quality control. Three hours weekly. Corequisite: ENVH 3040. Major restricted or instructor's consent.

ENHV 3060(3)
Environmental Regulation, Organization and Administration
ENVH 3070(3)  
Occupational Safety  
Workplace safety principles including regulations, program development and program implementation.

ENVH 3080(3)  
Industrial Ventilation  
Principles of ventilation. Design and evaluation of general dilution and local exhaust systems for control of industrial hazards. Prerequisites: MATH 1280 or MATH 1200 and MATH 1290 or MATH 1220 and MATH 1290.

ENVH 3090(3)  
Environmental Assessment Methods I  
Introduction to methods of assessing environmental problems. Includes information and data sources, experimental design, sampling and analytical techniques and theory, statistical methods, field projects and technical reporting. Prerequisite: CHEM 1250.

ENVH 3100(3)  
Environmental Assessment Methods II  
Advanced methods of assessing environmental problems. Includes information and data sources, experimental design, sampling and analytical techniques and theory, statistical methods and technical reporting. Prerequisite: ENVH 3090.

ENVH 4020(3)  
Principles of Water Quality  
Properties of water and biological, chemical and physical pollutants. Relationship between use and quality. Management strategies. Three hours lecture. Prerequisites: CHEM 1270 and CHEM 1280.

ENVH 4030(1)  
Water Quality Laboratory  
Laboratory practices in water quality. Three hours weekly. Corequisite: ENVH 4020. Major restricted or instructor's consent.

ENVH 4050(3)  
Hazardous Material Management  
Principles of managing hazardous waste and material, disposal, treatment, emergency response and clean-up. Consideration of environmental toxicology and risk assessment.

ENVH 4070(3)  
Environmental Toxicology  
Measurement, effects and mechanisms of toxicity on human health and the environment. Use of toxicology in environmental risk assessment and risk management. Prerequisite: CHEM 3060 or consent of instructor.

ENVH 4490(3)  
Epidemiology  
Principles and methods of epidemiological investigation. Distribution and determinants of health and disease in humans. Three hours lecture. Prerequisite: Statistics course. Credit allowed for no more than one: ENVH 4490 and BIOL 4490.

ENVH 4700(1 - 4)  
Special Problems in Environmental Health  
Student designs and carries out study or special project in area of interest. Prerequisite: consent of instructor. May be repeated.

ENVH 4910(1 - 3)  
Environmental Health Practicum  
Experience working under supervision in selected environmental, public health or health planning agencies or industries with environmental health units; emphasis on practice rather than observation. Prerequisites: instructor's permission, at least junior status. May be repeated up to 4 hours. Graded S/U.

ENVH 4920(3)  
Comprehensive Environmental Health Practices  
A capstone course for integrating environmental health principles into practical application. Dissemination and examination of internship research will also be considered. Prerequisite: ENVH 4910.

Subject: Environmental Technology  
ENVR 4210(3)  
Industrial Pollution Control  
Spring. Air and water pollution control regulations as they apply to industry. Functioning and selection of parameters of industrial pollution control equipment and selected case studies.

Subject: Environmental Studies  
ENVS 1010(3)  
Introduction to Environmental Studies  
Fall, Spring, Summer. Overview of environmental principles and concepts. Students consider contemporary environmental issues as they relate to the quality of life. Topics of environmental concern are used to develop skills in evaluation, analysis, and values clarification. Applicable to the BG Perspective (general education) social sciences requirement. Extra fee.

ENVS 2020(3)  
Environmental Perspectives  
Fall. Exploration of interdisciplinary thinking and analysis as it applies to Environmental Studies. Differences between environmental science, policy and analysis are explored as are career opportunities and preparation. Prerequisites: ENVS 1010 and a declared major in Environmental Science or Environmental Policy and Analysis.

ENVS 2530(3)  
Environments in Context  
Fall, Summer. Field-based overview of environmental principles and concepts in context of their physical, cultural, social, economic, and ecological relationships. Emphasis on resource sharing and environmental
issues in North America. Taught in the field while traveling to various sites. Corequisites: GEOL 2500, GEOL 2510, and ACS 2520 or permission of the instructor. Honors credit optional. Applicable to the BG Perspective (general education) social sciences and international perspective requirements.

ENVS 3010(3)

Environmental Problems
Fall, Spring, Summer. In-depth study of specific environmental problems. Current and historic responses are examined through research and review of source materials. Emphasizes a synthesizing, multidisciplinary team approach to problem solving. Applicable to the BG Perspective (general education) social sciences requirement. Extra fee.

ENVS 3100(4)

Environmental Field and Laboratory Methods
Fall. Essential field and laboratory techniques for environmental scientists. 3-hour lecture and 3-hour field/lab per week. Techniques include hydrology and water analysis; field sampling of aquatic and terrestrial plants, animals, and microbtes; soil characterization and analysis; land use classification and analysis; and analysis of weather and climate patterns. Course emphasis is integrative across the sciences. Prerequisites: For Environmental Science and Environmental Policy and Analysis majors only, or permission of the instructor; MATH 1150 or MATH 2470 and 2 science courses required for the majors. Extra fee.

ENVS 3340(3)

Natural Area Interpretation
Fall, Spring. Exploration of a variety of natural ecosystems, including floodplains, oak savanna, prairies, swamps and marshland to provide a basic understanding of their natural history, plant/animal interactions and area-appropriate restoration processes: emphasis is on skills, knowledge and current techniques for presentation of natural area attributes to the public. Prerequisite: ENVS 1010 or consent of instructor.

ENVS 4000(1 - 3)

Special Topics in Environmental Studies
Fall, Spring, Summer. Selected topics and subject areas in environmental studies. Offered to cover current environmental issues. Prerequisite: consent of instructor. Can be repeated for a maximum of 9 credits, if topics differ. Extra fee.

ENVS 4010(3)

Environmental Strategies
Fall, Spring. Investigation of strategies used by various organizations, industries, institutions and government agencies to solve current environmental problems. Models and simulation strategies are used to address toxic substances, water resources, pesticides, climate and wildlife dispersion. Two hours lecture/discussion, one two-hour lab. Prerequisites: ENVS 3010 and one statistics course.

ENVS 4020(3)

Environmental Impact Statements
Fall, Spring. History, philosophy and legal authority for environmental impact statements and assessments. Specific documents are analyzed and the development of evidential information and techniques are included. Practice in writing an environmental impact statement is given using one or more current issues as a focus. Extra fee.

ENVS 4030(4)

Geographic Information Systems
Fall. Collection, manipulation, integration and automated display of spatial data from various disciplines with particular emphasis on environmental geology, resource management and spatial analysis. Three lectures and one three-hour laboratory. Credit allowed for no more than one: ENVS 4030, GEOL 4030 or GEOG 4240.

ENVS 4120(3)

Great Lakes Ecosystems
Spring. An interdisciplinary study of Great Lakes ecosystems with emphasis on history, development, natural resources, environmental concerns, transboundary issues and the potential for international cooperation. Extra fee.

ENVS 4130(3)

Applications in Environmental Geographic Information Systems
Spring. Geographic Information Systems practice and theory applied to environmental problems. The course focuses on the use of ArcView software for modeling and interpreting the natural environment. Lectures are integrated into project-based lab exercises and group projects. Prerequisite: ENVS 1010 or ENVS 3010.

ENVS 4150(3)

Environmental Education
Spring. Use of strategies and resources to develop a personal environmental education philosophy. Curriculum design, service learning, field experience coordination and development of a proposal to fund an environmental education program using current source materials are stressed. Prerequisite: ENVS 1010, ENVS 2010, or ENVS 2530, or consent of instructor.

ENVS 4200(3)

Environmental Planning
Fall, Spring. This is a practical course designed to introduce students to basic planning concepts as they relate to environmental planning. Students will learn to use planning tools for growth management, sustainable development, green space conservation and land management.

ENVS 4260(3)

Environmental Justice
Fall, Spring. In this course students will examine the issues of race, ethnicity and class as they relate to environmental problems. Students will learn about theories of social justice, the role of environmental
justice in the creation of sustainable communities, the development of the environmental justice movement, and legal and policy responses to environmental injustices. Both domestic and international issues will be examined.

ENVS 4700(1 - 3)
Readings/Research in Environmental Studies
Independent readings or research on topics of current or specialized interest in environmental studies. May include library, laboratory or field work. Prerequisite: consent of instructor. May be repeated to a maximum of six hours.

ENVS 4890(1 - 3)
Internship
Applied experience for students in environmental programs. Specific proposal and approval of internship coordinator and supervising instructor required prior to enrollment. May be repeated to a maximum of six hours. Prerequisite: junior standing. Graded S/U.

ENVS 4930(1 - 6)
Field Experience
On demand. Study of specific environmental problems or ecosystem attributes. May be repeated only once with different topics. Prerequisites: ENVS 1010 or consent of instructor.

ENVS 4950(1 - 3)
Workshop in Environmental Science or Policy
Fall, Spring, Summer. Intensive educational experience on selected environmental topics. May be repeated for credit with different topics. Prerequisite: ENVS 1010 or consent of instructor.

Subject: Environmental Health Technology
ENVT 2700(3)
Occupational Safety and Hygiene
Regulatory considerations, evaluation and control of industrial hazards, personal protective equipment, employee assistance programs, accident prevention and investigation, emergency planning. Three hours lecture.

ENVT 2800(1)
Applied Food Service ServSafe Certification Course
Covers the Hazard Analysis Critical Control Point (HACCP) food safety system principles, and the Ohio Food Rules.

ENVT 2900(1 - 3)
Experimental Studies in the Environment
Environmental study projects, workshops, or seminars dealing with air, water, or land resource utilization, planning and control. May be repeated up to six credits if topics vary.

ENVT 2910(1 - 3)
Field Experience
Paid work activity in environmental technology related to an occupational objective. One credit requires 180 hours of work. May be repeated up to 3 credits. Prerequisite: permission of site supervisor and adviser.

Subject: Ethnic Studies
ETHN 1010(3)
Introduction to Ethnic Studies
Fall, Spring, Summer. This gateway course to the field of Ethnic Studies introduces students to interdisciplinary analyses of race and ethnicity in the U.S. The course explores the social construction of race and ideologies of race in colonial conquest, slavery, and immigration. It also examines processes and negotiations of racialization and the intersections of race with other hierarchies. Applicable to the BG Perspective (general education) cultural diversity in the United States requirement.

ETHN 1100(3)
Introduction to Latinos in the United States
Fall, Spring. Latino experience in the United States; cultures, life experiences and the limited political, education, socio-economical opportunities of this minority. Applicable to the BG Perspective (general education) cultural diversity in the United States requirement.

ETHN 1200(3)
Introduction to Black Studies
Fall, Spring, Summer. Introduction to the black experience with special emphasis upon but not limited to the cultural experience of the United States. Applicable to the BG Perspective (general education) cultural diversity in the United States requirement.

ETHN 1300(3)
Introduction to Asian American Studies
Fall. Similarities and differences of the various components of the Asian American category with reference to their individual histories and collective situation from the 19th century to the present. Applicable to the BG Perspective (general education) cultural diversity in the United States requirement.

ETHN 1600(3)
Introduction to Native American Studies
Fall, Spring. Introduction to the Native American diaspora; general overview and comparative analysis of Native peoples of North America (U.S., Canada, and Mexico) in historical and cultural contexts.

ETHN 2110(3)
History of Mexican Americans
Spring. History of Mexican Americans from the Texas Revolution, Mexican-American War to the present. Applicable to the BG Perspective (general education) cultural diversity in the United States requirement.
ETHN 2200(3)
African Literature
Fall. Creative and critical writing in the English language by writers of African descent. Also writers from the Caribbean. Credit only allowed for one of ETHN 2200, ROCS 2200. Applicable to the BG Perspective (general education) humanities and arts and international perspective requirements.

ETHN 2300(3)
The Native American in Film
Fall or Spring. Construction of the Native American in popular culture from 1950s to contemporary period, including Hollywood and independent film.

ETHN 2600(3)
Contemporary Issues in Native America
Fall. Examines selected contemporary issues in Native America; migration and urbanization, reservation economic development, activism and native land, water, fishing and hunting rights, education, religious freedom, self-determination and sovereignty. Applicable to the BG Perspective (general education) cultural diversity in the United States requirement.

ETHN 3000(3)
Topics in Ethnic Studies
Fall, Spring, Summer. Special ethnic topics of interest to students provided as a part of regular offering. May be repeated.

ETHN 3010(3)
Ethnicity in the United States
Fall, Spring, Summer. Advanced study of the methods and approaches of the discipline of ethnic studies by focusing on contemporary issues and comparative theories of ethnicity. Prerequisite: Any 1000-level ETHN course. Applicable to the BG Perspective (general education) cultural diversity in the United States requirement.

ETHN 3030(3)
Race, Representation, and Culture
Fall, Spring, Summer. This course examines popular racialized stereotypes within the context of American popular culture. It interrogates the historical, social and ideological processes and practices that have constituted racialized identities in the United States.

ETHN 3040(3)
Ethnicity and Creative Writing
Spring. A writer's workshop focusing on the interaction between processes and strategies of creative writing and issues of ethnicity. Students create a portfolio of original writing which may include one or a combination of stage play, film/teleplay, fiction, poetry, essays, reviews, etc.

ETHN 3050(3)
Women of Color in the United States
This course explores how race, gender, class, sexuality, and religion intersect and converge in shaping the lives of women of color in the United States. It emphasizes the diversity of experience of women of color as they resist and contest the material and cultural constraints that limit them. The course also focuses on women of color as agents of social and political change, and provides perspectives on the ways in which women of color shape and define American institutions and society. Applicable to the BG Perspective (general education) cultural diversity in the United States requirement.

ETHN 3100(3)
Mexican Culture
Spring. The culture of Mexico in the 20th century with emphasis on economics and the national experience as reflected in the family, religion, arts and other select facets of the culture. Applicable to the BG Perspective (general education) humanities and arts and international perspective requirements.

ETHN 3120(3)
Chicanos in the United States
Spring. Mexican American culture in the U.S. Topics include family structure and roles, religion, education, and immigration, among other topics. Applicable to the BG Perspective (general education) cultural diversity in the United States requirement.

ETHN 3170(3)
African Cultures and Societies
Fall. This is an introductory course on Africa from the earliest times through the colonial and modern eras. Themes include origins, myths and stereotypes, artistic expressions and cultural values, socio-political and economic development, colonial experience and contemporary conditions. Credit allowed only for one of HIST 3170, ETHN 3170.

ETHN 3200(3)
Literature of Black Nationalism
Spring. Contributions made by African and African American writers to the rise of nationalism.

ETHN 3300(3)
Race and Labor in the United States
Fall, Spring. This course examines the relationships and connections between race and class, the influence of shifting conceptions of race on the development of the American labor movement, and the origins and consequences of racially-restrictive employment patterns in the United States.

ETHN 3400(3)
Afro-American Cinematic Experience
Fall or Spring. Historical and contemporary portrayals of African-Americans in film. Emphasis on filmic approaches to race relations, cinematic elaboration of racial stereotypes, film and social experience of black life, and legitimation functions for film. Applicable to the BG Perspective (general education) humanities and arts requirement.

ETHN 3440(3)
African Women
An interdisciplinary exploration of the lives and experiences of women in Africa. Topics covered will include
an historical overview; intersections among gender, politics, economics, nation, and religion; and representations of African women. Credit allowed only for one of ETHN 3440 or WS 3440.

ETHN 3510(3)
International Perspectives on Women
Spring. An introduction to the lives and concerns of women around the world. Addresses the impact of the global order on women's day-to-day existence.

ETHN 3610(3)
Native American Women
Spring. Examines the social, political, economic and spiritual lives of Native American women of various tribal nations in their traditional and contemporary aspects.

ETHN 3950(1 - 3)
Workshop on Current Topics
Fall, Spring, Summer. Comprehensive study of America's ethnicity with special emphasis upon the represented ethnic groups in northwest Ohio. May be repeated.

ETHN 4020(3)
Colonial Africa
Fall. This course examines the social-cultural, political and economic transformation that occurred in Africa in the nineteenth and twentieth centuries. Themes such as precolonial African traditional institutions, the slave trade, societies and revolutions, legitimate commerce, European imperialism, colonial rule, nationalism, decolonization and neo-colonialism will be considered. Credit allowed only for one of HIST 4020, ETHN 4020.

ETHN 4030(3)
Contemporary Africa
Spring. This course focuses on selected themes and case studies in contemporary African affairs from 1960 when most African countries gained their independence to the present. Themes to be examined include the nature of freedom which African countries regained from their European colonizers; ethnicity and the task of nation-building; and social, economic and political changes since independence. Credit allowed only for one of HIST 4030, ETHN 4030.

ETHN 4040(3)
Africas and World Politics
Spring. This course examines how both domestic and international issues impinge on Africa. Selected themes and case studies to be considered include the slave trade, European exploration and political aggression, World Wars and implications, Cold War and its aftermath, and South Africa and apartheid; case studies such as the crises in Rwanda, Liberia, Somalia, Sierra Leone and their international implications will be examined. Credit allowed only for one of HIST 4040, ETHN 4040.

ETHN 4100(3)
Mexican-American Social Thought
Spring. The development of the Mexican philosophical thought as related to the Chicano ideologies, their significant parallels within contemporary periods and institutions. Applicable to the BG Perspective (general education) cultural diversity in the United States requirement.

ETHN 4150(3)
Contemporary U.S. Immigration
Spring. Situating contemporary U.S. immigration in historical and global context, the course examines: who is migrating and why; how migrants create identities, communities, and economic niches; and how they transform racial, ethnic, gender, sexual, class and cultural hierarchies in the U.S.

ETHN 4200(3)
Latino/a Cultural Studies
Spring. This course examines the relationship between popular culture and constructions of race in the United States. Focusing on Latinos and Latinas, we will analyze patterns of representation of this racial/ethnic group, as well as patterns of production and consumption of popular culture.

ETHN 4250(3)
Discourses of Empire and Nation
Fall or Spring. Development of ideologies of race, ethnicities, and nations within colonial and postcolonial contexts. Applicable to the BG Perspective (general education) humanities and arts and international perspective requirements.

ETHN 4300(3)
National and Global Perspectives on Race and Ethnicity
Fall, Spring. The historical, structural, political, and everyday basis of ethnic difference and racial/ethnic conflict; focused case-study approach to comparing different systems of race and ethnic relations in the U.S., the Americas, or globally. Prerequisite: junior or senior status, or consent of instructor. Applicable to the BG Perspective (general education) social sciences and international perspective requirements.

ETHN 4350(3)
Race and Urban Housing
Fall. This course examines the history of residential segregation in the United States. Focusing on the period from the late-19th century to the present, we will examine phenomena such as urbanization, (im)migration, white-flight, industrialization and deindustrialization, wealth and poverty as it relates to the establishment of racial hierarchy in American society.

ETHN 4400(3)
Women and Globalization
Fall. Examine the intensification of globalization as a set of economic and cultural processes impelled by transnational migrations of capital and labor, and the incorporation of women in globalized workforces, spaces, institutions, and identities. Emphasis on how "Third World" and "racial-ethnic" women form the bottom of the global labor pool.

ETHN 4500(3)
Racial Discourses and U.S. Social Policies
Fall, Spring. This course surveys the intellectual history of race from antiquity to the late twentieth century. It examines both the history of "scientific" and popular thinking about race and racial differences as well as how the development of racial belief systems influenced social policy in the United States.

**ETHN 4600(3)**

**Third World Cinema**

Fall. Cinematic traditions and film practices in the Third World and among minoritarian film movements with emphasis on anti-colonial and postcolonial political film. Applicable to the BG Perspective (general education) humanities and arts and international perspective requirements.

**ETHN 4700(1 - 3)**

**Readings in Ethnic Studies**

Fall, Spring, Summer. Individual extensive readings in consultation with an Ethnic Studies faculty member in fields of special interest. May be repeated. Prerequisite: Open only to Ethnic Studies majors with permission of department Undergraduate Advisor.

**ETHN 4800(3)**

**Seminar in Ethnic Studies**

Fall. Specific content areas offered depends on demand and interest of staff. May be repeated three times. Prerequisite: consent of instructor. May or may not partially fulfill group requirements.

**ETHN 4850(3)**

**Qualitative Research Methods**

Introduces students to modes of qualitative social research commonly found in field of ethnic studies and American culture studies. Focus on data gathering process as well as data analysis. Credit only allowed for one of ETHN 4850, ACS 4050.

**ETHN 4860(3)**

**Senior Project**

Fall, Spring, Summer. Directed individual research concerning issues in ethnic studies, resulting in a research paper. Prerequisite: ETHN 4850, ethnic studies major or minor, permission of instructor and approval of department Undergraduate Advisor.

**ETHN 4890(1 - 3)**

**Field Study in Ethnic Studies**

Fall, Spring, Summer. Service learning course in which students are placed in local agencies, educational centers, or non-profit organizations that are relevant to the study of race and ethnicity. Prerequisites: Open only to Ethnic Studies majors with permission of the Department of Ethnic Studies Undergraduate Advisor. Graded S/U. May be repeated up to 3 hours.

**Subject: Family & Consumer Sciences**

**FCS 3890(1 - 5)**

**Supervised Field Experience**

Fall, Spring, Summer. Supervised work experience of diversified nature in approved field site. Contact hours and specific requirements obtainable from authorized family and consumer sciences faculty members in the specialized areas. May be repeated. Prerequisite: consent of department. Graded S/U.

**FCS 3950(1 - 3)**

**Workshop on Current Topics**

Intensive educational experience on selected topics related to skill development, content update or materials development. Typically, an all-day or similar concentrated time format used. May be repeated on approval of adviser. Some workshops require transportation.

**FCS 4700(1 - 3)**

**Independent Study**

Fall, Spring, Summer. For advanced students who want to conduct intensive study of selected problems in family and consumer sciences. For undergraduate credit only. Prerequisite: consent of department chair. May be repeated.

**FCS 4800(1 - 3)**

**Seminar in Family and Consumer Sciences**

In-depth examination of topics in family and consumer sciences not covered by existing coursework. Repeatable once. Undergraduate credit only.

**FCS 4890(5 - 12)**

**Internship**

Fall, Spring, Summer. Internship in a professional environment. Work settings are approved on an individual basis. May be repeated. Graded S/U.

**Subject: Finance**

**FIN 2000(3)**

**Personal Finance**

Personal financial management; budgeting, borrowing sources and costs; auto, property, and life insurance; home ownership financing; personal investment strategy; and retirement planning.

**FIN 3000(3)**

**Business Finance**

 Acquisition of assets and funding in business enterprise. Fundamentals of financial analysis, working capital management, and investment and financing decision making. Prerequisites: ACCT 2000 or ACCT 2210; ECON 2000 or ECON 2020; Junior standing.

**FIN 3040(3)**

**Entrepreneurial Finance**

Financial issues facing entrepreneurial and small business ventures. Topics include capital acquisition, cash flow management, financial analysis and methods for harvesting the venture. Does not count toward finance specialization in the BSBA program. Prerequisites: ACCT 2000 or ACCT 2210; ECON 2000 or ECON 2020; and BA 2040. Concurrent registration permitted in BA 2040.
FIN 3400(3)
Financial Markets
Nature and function of money and capital markets, with emphasis on interest rate determination and forces shaping structure of financial markets, including issues of regulation and control. Prerequisite: grade of C or better in FIN 3000.

FIN 3500(3)
Corporate Finance
Advanced practices of financial management are developed. Financial models used in decision-making and their application to major areas of business finance are emphasized. Prerequisites: STAT 2120 or STAT 2200 and a grade of C or better in FIN 3000.

FIN 4100(3)
International Financial Management
An extension of financial management to the international arena with emphasis on financial strategies of multinational corporations. Topics covered include foreign exchange markets, currency futures and options markets, swaps, international securities markets, managing and hedging currency risk, multinational financing strategies and capital budgeting, and international portfolio management. Prerequisite: grade of C or better in FIN 3000.

FIN 4120(3)
Financial and Retirement Planning
Development of a client's comprehensive financial plan focusing on various aspects of personal retirement planning. Topics include construction and analysis of personal financial statements, education planning, retirement needs analysis and investments, qualified retirement plans, IRAs, distribution options, Social Security and Medicare benefits, and tax and government regulations affecting retirement plans. Prerequisite: grade of C or better in FIN 3000.

FIN 4200(3)
Insurance and Employee Benefit Planning
Methods and alternatives for managing personal risk exposures. Topics include identifying risk exposures, legal aspects of insurance, life insurance needs analysis and policies, medical and disability insurance, Social Security benefits, long term care insurance, homeowners insurance, property and liability insurance, auto insurance, employee benefits, and financial planner ethics. Prerequisite: grade of C or better in FIN 3000.

FIN 4350(3)
Investment Analysis and Management
Appraisal of investment risks of specific securities; valuation and suitability of specific securities for investment. Management of fixed-income and equity portfolios emphasizing the role that options and futures play in managing securities portfolios. Prerequisites: STAT 2120 or STAT 2200 and grade of C or better in FIN 3000.

FIN 4450(3)
Management of Financial Institutions
Management of commercial banks, investment banks, investment companies and other financial institutions. Emphasis on services and functions of financial institutions and management of risk in providing those services including lending, underwriting, deposit services, merger and acquisition assistance, and intermediation. Prerequisite: grade of C or better in FIN 3400.

FIN 4500(3)
Financial Modeling
Development of spreadsheet applications and use of the case method to apply decision-making procedures to realistic problems in finance. Prerequisite: grade of C or better in FIN 3000.

FIN 4910(1 - 3)
Studies In Finance
On demand. In-depth study of selected areas or contemporary problems. May be offered individually as well as in classes depending on student needs and nature of material. May be repeated to six hours. Prerequisite: approval of chair and instructor.

Subject: Food & Nutrition

FN 2070(3)
Introduction to Human Nutrition
Fall, Spring, Summer. Basic concepts and principles in the science of human nutrition, energy balance and weight control, individual nutrient needs, diet selection, nutrition related metabolism and physiological functions, nutritional diseases, and current human nutrition controversies. Applicable to the BG Perspective (general education) natural sciences requirement.

FN 2100(3)
Fundamentals of Food Science
Fall, Spring. Science of foods in relation to chemical composition, nutritional value, processing methods, quality, and standards of identity. Two hours lecture and three hours of lab. Extra fee.

FN 2120(3)
Food Preparation, Availability, and Resources
Fall, Spring and on demand. Principles and application of basic food preparation, meal planning, and food delivery. Food availability, budgets, and food access of the individual, family, and community. Two hours of lecture, two hours of lab. Prerequisite: FN 2070 or consent of instructor. Extra fee.

FN 3100(3)
Nutritional Assessment and Counseling
Fall, Spring. Methods for evaluating nutritional status of individuals and population groups, and techniques used in diet instruction. Methods of quality assurance, program evaluation, laws, regulations, and standards affecting dietary practice. Prerequisites: FN 2070 or consent of instructor. Extra fee.

FN 3260(3)
Food and Culture
Fall and Summer. Geographic, economic, political, religious, environmental, and cultural influences on
dietary patterns in the United States and other regions of the world. Emphasis is on skills needed for students to identify the relevant cultural food patterns among individuals and communities. Prerequisite: FN 2070 or consent of instructor. Extra fee.

**FN 3310(3)**  
*Quantity Food Production*  
Fall. Planning and service of quantity foods for institutions and restaurants. Menu planning, purchasing, production scheduling, recipe standardization, receiving, storage and issuing. Two hours lecture, three hours clinical experience. Prerequisite: FN 2100 or consent of instructor.

**FN 3350(3)**  
*Principles and Practice of Food Protection*  
Fall. Principles involved in identification and prevention of the causes of food contamination. Public health regulations and microbiological control measures in various food service operations. Could lead to Education Foundation Sanitation Certification. Three hours lecture.

**FN 3720(3)**  
*Principles of Foodservice Management*  
Spring. Management principles and procedures in institutional or commercial food services. Selection, training, and supervision of personnel. Food procurement, production and marketing. Clinical experience. Two hours lecture and three hours of clinical experience.

**FN 3890(2 - 5)**  
*Supervised Field Experience in Food and Nutrition*  
On demand. Supervised work experience in an approved site. Contact hours and specific requirements arranged with FN faculty. May be repeated. Graded S/U.

**FN 4310(3)**  
*Experimental Foods*  
Spring. Experimental methods of quality control and product development. Scientific reasoning applied to the methods of food preparation. Subjective and objective evaluation criteria will be practiced. Two hours of lecture and three hours of lab. Prerequisites: FN 2100, CHEM 3060 or consent of instructor. Extra fee.

**FN 4320(3)**  
*Advanced Nutrition*  
Spring. Topics in normal nutrition, nutrient metabolism interrelationships, and metabolic integration. Three hours of lecture. Prerequisites: FN 2070, CHEM 3060.

**FN 4340(3)**  
*Medical Nutrition Therapy I*  
Fall. Nutritional therapies for specific medical conditions. Physiological and biochemical basis for nutrition intervention in disease. Pathophysiology of major disease states and impact on nutritional status and normal metabolism. Assessment of nutritional status, implementation, monitoring, and evaluation of appropriate nutrition therapy. Prerequisites: BIOL 3320, CHEM 3080, FN 3100, FN 4320.

**FN 4350(3)**  
*Life Cycle Nutrition: Pregnancy to Adolescence*  
Fall. Nutrition of pregnant women, infants, and children in health and disease, from prenatal period to adolescence. Prerequisite: FN 2070 and FN 3100.

**FN 4360(3)**  
*Life Cycle Nutrition: The Middle and Later Years*  
Spring, Summer. Psychological, physiological, and socio-economic factors affecting diet and nutritional needs in group and individual situations. Two hours of lecture and two hours of clinical experience. Prerequisites: FN 2070 and FN 3100.

**FN 4380(3)**  
*Medical Nutrition Therapy II*  

**FN 4400(3)**  
*Research Methods in Nutrition, Foods, and Dietetics*  
Fall. Methods in research design, data analysis, and presentation. Techniques in dietetics, nutrition, foods, foodservice management, and clinical studies. Preparation of research proposals, evaluating published research, and ethical issues. Prerequisites: FN 3100, FN 4320 and MATH 1150 or equivalent.

**FN 4420(4)**  
*Laboratory Methods in Food and Nutrition Sciences*  
Fall. Application of quantitative and qualitative physical, chemical, and instrumental methods of analysis in food and nutrition sciences. Three one-hour lectures and one three-hour lab. Prerequisites: FN 2100, FN 3100, and FN 4320 or consent of instructor. Extra fee.

**FN 4700(1 - 3)**  
*Independent Study in Food and Nutrition*  
On demand. Supervised individual study. In-depth study of topics or problems in food and/or nutrition sciences. May be repeated. Prerequisite: consent of department.

**FN 4800(3)**  
*Seminar in Food and Nutrition*  
Fall, and on demand. In-depth examination of contemporary issues, concepts, and topics in food and nutrition. Prerequisite: seniors only, or consent of instructor.

**FN 4890(5 - 12)**  
*Internship in Food and Nutrition*  
On demand. Internship in a professional environment. Work settings are approved on an individual basis. May be repeated. Graded S/U.
Subject: French
FREN 1010(4)
Elementary French I
Fall, Spring. Beginning oral-aural study; attention to grammar. Four class periods and scheduled oral practice each week. Applicable to the BG Perspective (general education) humanities and arts and international perspective requirements.

FREN 1020(4)
Elementary French II
Fall, Spring. FREN 1010 continued. Four class periods and scheduled oral practice each week. Prerequisites: FREN 1010 or one year of French in high school. Applicable to the BG Perspective (general education) humanities and arts and international perspective requirements.

FREN 2010(3)
Intermediate French I
Fall, Spring. Grammar review; development of the four skills. Three class periods and laboratory practice each week. Prerequisite: FREN 1020 or two years of French in high school. Applicable to the BG Perspective (general education) humanities and arts and international perspective requirements.

FREN 2020(3)
Intermediate French II
Fall, Spring. Three class periods and scheduled laboratory each week. Cannot be taken for credit if credit for FREN 2120 has been received. Cannot be taken concurrently with FREN 2120. Prerequisite: FREN 2010 or three years of French in high school. Applicable to the BG Perspective (general education) humanities and arts and international perspective requirements.

FREN 2120(3)
Reading French
Fall, Spring, Summer. This course will teach students the knowledge, strategies, and techniques for reading French at the intermediate level. Readings in French; class conducted in English. Prerequisite: FREN 2010 or three years of high school French. Does not count as prerequisite for 3000-level class. Applicable to the BG Perspective (general education) humanities and arts and international perspective requirements.

FREN 2200(2)
Language and Culture through Community Living
Fall, Spring. This course for French House residents is designed to improve conversational French and cultural awareness about French-speaking countries. Prerequisite: must be a French House resident. May be repeated up to 8 hours.

FREN 2220(3)
French Culture
Fall and/or Spring. An introduction to the cultural, social, intellectual, and artistic life of French-speaking peoples from the perspective of French-American relations and intercultural comparisons and using readings, film, music, and other media. Readings and class in English. Does not fulfill language requirements or count toward the major or minor in French. Applicable to the BG Perspective (general education) humanities and arts and international perspective requirements.

FREN 2840(3)
French Canadian Life Through Literature
Selected authors studied in translation. Use of a socio-critical approach enables students to discover the particular aspects of the French Canadian expression of American experience.

FREN 3000(1)
Preparation for Study in France and Burkina Faso
Spring. Limited to participants in AYA/France-Burkina Faso (year, semester, summer) programs. Readings and discussions to encourage and facilitate student preparation for upcoming study abroad experience. Course conducted during last 6 weeks of Spring semester, following program application deadline. Does not count toward French major or minor. Conducted in English. Graded S/U.

FREN 3500(3)
Problems in Translation
Practical work in translilingual rendering of expository texts, stressing vocabulary building and critical reading. Prerequisite: FREN 2020 or FREN 2120.

FREN 3530(3)
French Diction
French pronunciation; syllabification, stress, linking, intonation. Prerequisite: FREN 2020. Usually taught abroad.

FREN 3550(3)
French Linguistics
Fall. Sound system and grammatical structures of modern French; practical application. Prerequisite: FREN 2020. Usually taught abroad.

FREN 3560(3)
Skills for Oral Proficiency
Fall, Spring. Development and intensive practice of oral skills and communication strategies. Emphasis on self-expression. Prerequisite: FREN 2020 or four years of French in high school.

FREN 3570(3)
Skills for Effective Writing
Fall, Spring. Development and intensive practice of writing skills and communication strategies. Emphasis on stylistics. Prerequisite: FREN 2020 or four years of French in high school.

FREN 3630(3)
Introduction to French Literature
Spring. Study of key authors, periods, genres, or themes in French literature. Prerequisites: FREN 3560 and FREN 3570, or permission of instructor.
FREN 3660(3)
Introduction to Francophone Literature
Fall. Comprehensive study and discussion of key texts and issues in the literature of the French-speaking world outside France. Study of fictional and non-fictional texts. Prerequisites: FREN 3560 and FREN 3570, or permission of instructor.

FREN 3730(3)
Introduction to French Civilization
Fall. Past and/or contemporary French culture and civilization. Includes French history, politics, education, art, media, and/or popular culture. Prerequisites: FREN 3560 and FREN 3570, or permission of instructor.

FREN 3760(3)
Introduction to Francophone Civilizations
Spring. Cross-century study of historical, social, cultural, and economic aspects of French-speaking world outside France through political, social, intellectual, and artistic texts. Prerequisite: FREN 3560 and FREN 3570, or permission of instructor.

FREN 3950(1 - 3)
Workshop in French
Intensive educational experience on selected topics. An all-day or similar concentrated format. May be repeated if topics differ, on approval of advisor.

FREN 4440(4)
French Film
Overview of French film history; film as reflection of society; introduction to 'auteur' criticism and semiotics. Film in French and subtitles. English and French discussion sections. Prerequisite: 3000/4000 literature/culture course or permission. Extra fee.

FREN 4510(3)
Advanced Composition and Conversation
Development of fluency and accuracy in written and oral skills at an advanced level. Prerequisite: FREN 3560 or FREN 3570.

FREN 4530(3)
Advanced French Diction
Continued study of pronunciation, stress and intonation. Prerequisite: FREN 3530. Usually taught abroad.

FREN 4540(3)
Translation Workshop
Intensive practice in translating technical and literary texts. Emphasis on French to English translation. Intended to prepare student for certification by a professional translators' organization. Prerequisite: FREN 3500.

FREN 4550(3)
French Applied Linguistics
This course introduces students to the linguistic features of French, including comparisons between French and other languages, to the changing nature of language, and to key differences in varieties of French. It also encourages students to accommodate for gaps in their own knowledge of French and to seek opportunities to learn about varieties of French by becoming autonomous learners. Prerequisites: FREN 3530, FREN 3560, and FREN 3570.

FREN 4580(3)
Career French I
Terminology used in commercial operations, economics, international trade; emphasis on business correspondence; some translation. Prerequisite: FREN 3560 or FREN 3570.

FREN 4630(3)
Topics in French Literature
Fall and/or Spring. Advanced study of selected texts, authors, genres, or themes in French literature. May be repeated. Prerequisite: FREN 3630.

FREN 4660(3)
Topics in Francophone Literature
Fall and/or Spring. Advanced study of selected texts, authors, genres, or themes from the French-speaking world outside France. May be repeated. Prerequisite: FREN 3660.

FREN 4700(1 - 3)
Independent Readings in French
Readings for the advanced student who wishes to study a particular author or period, or problem in language or civilization. Prerequisites: consent of department chair and instructor. May be repeated.

FREN 4730(3)
Topics in French Civilization
Fall and/or Spring. Advanced study of selected themes in French culture and civilization. May be repeated. Prerequisite: FREN 3730.

FREN 4760(3)
Topics in Francophone Civilizations
Fall and/or Spring. Advanced study of topics in French-speaking cultures/civilizations outside France including colonialism, nationalism, immigration, cultural pluralism. Emphasis on cultures represented may vary. Prerequisite: FREN 3760.

FREN 4880(3)
Seminar in French Language, Literature, Art, or Civilization
Fall and/or Spring. Intensive study of author, literary school, genre, theme, or advanced language issue. May be repeated if topics clearly differ. Prerequisite: FREN 3630 or FREN 3660.

Subject: Future Studies
Introduction to Futuring
A basic course in future studies covering a brief historical review of futuring, basic tools of analysis, the role of creativity and responsibility for our collective future.

Subject: Geography

GEOG 1210(3)
World Geography: Eurasia and Africa
Fall, Spring. Geographical analysis of variations and interrelationships of physical, cultural, economic, political, and population factors across the earth's surface. Focus on Europe, Africa, Middle East, and Asia. Applicable to the BG Perspective (general education) social sciences and international perspective requirements.

GEOG 1220(3)
World Geography: Americas and the Pacific
Fall, Spring. Geographical analysis of variations and interrelationships of physical, cultural, economic, political, and population factors across the earth's surface. Focus on North America, Latin America, Australia-New Zealand, and the Pacific Islands. Applicable to the BG Perspective (general education) social sciences and international perspective requirements.

GEOG 1250(3)
Weather and Climate
Fall, Spring. Atmospheric elements and controls; earth-sun relationships, weather components, weather prediction, and climatic types and distribution. Two one-hour lectures, one-hour demonstration-discussion. Applicable to the BG Perspective (general education) natural sciences requirement.

GEOG 2130(3)
Meteorology
Fall. Physical processes of atmosphere and relationships to daily weather patterns. Two one-hour lectures, one two-hour laboratory. Extra fee.

GEOG 2250(3)
Geography of the Global Economy
Fall. Geographical distribution of resources affecting development; location of economic activities, urbanization, regional growth, trade patterns, and changing global variations in development. Applicable to the BG Perspective (general education) social sciences and international perspective requirements.

GEOG 2300(3)
Cultural Geography
Fall, Spring. Geographic influences upon human activities on the earth's surface. Cultural processes and global patterns of religion, language, education, technology, diet, health, resource use, political organization, economic activity, social organization, settlement, and population. Applicable to the BG Perspective (general education) social sciences and international perspective requirements.

GEOG 3000(3)
Topics in Geography
Experimental courses considered part of regular offering. May be repeated with different topics.

GEOG 3030(3)
Severe Weather
Fall. Occurrence, cause and hazards of blizzards, surface cyclones, hurricanes, severe thunderstorms, tornadoes, lightning, hail, floods, droughts and unusual weather patterns.

GEOG 3120(3)
Marketing Geography
Spring. Geographical study of marketing concerned with the spatial nature of commerce. Primary focus on geodemographic analysis, GIS applications, and the location of retailing.

GEOG 3210(3)
Cartography and Map Communication
Practical map planning and construction, and production, thematic mapping; basic cartographic theory, and computer application. Two hours of lecture and two hours of lab. Extra fee will not apply to online course. Extra fee.

GEOG 3250(3)
Population Geography
Fall. Spatial analysis of size, distribution, density, migration, age-sex composition, and dynamic factors of change in major world population regions and sub-regions. Applicable to the BG Perspective (general education) social sciences and international perspective requirements.

GEOG 3310(3)
Principles of Conservation Ecology
Fall. Principles necessary in considering environmental problems and application to various aspects of conservation; interdisciplinary approach combining social, biological and physical sciences. Applicable to the BG Perspective (general education) social sciences and international perspective requirements.

GEOG 3370(3)
Aboriginal Peoples of the United States and Canada
Spring. Past and present spatial aspects of aboriginal groups in the United States and Canada involving regions, diffusion, ecology, integration, and landscapes to enhance a cross-cultural awareness of differences and similarities among these cultures, their physical environments, and their interactions with European peoples. Applicable to the BG Perspective (general education) cultural diversity in the United States requirement.

GEOG 3400(3)
Asia: East, Southeast, and South
Topical geographic analysis of the physical, cultural, political, demographic, agricultural, industrial, and international trade features of East, Southeast, and South Asia as they relate to development and change and the global role of this region.
GEOG 3420(3)  
United States and Canada  
Fall every other year. Systematic and regional approach to understanding the interaction of people and the land in the United States and Canada, with an emphasis on economic, social, and political changes and challenges. Applicable to the BG Perspective (general education) cultural diversity in the United States requirement.

GEOG 3470(3)  
Africa  
Analysis of the environmental and human geography of Africa, development opportunities and challenges, as well as contemporary interactions with other parts of the world.

GEOG 3490(3)  
Latin America  
Spring. Topical geographic analysis of the physical, cultural, political, demographic, agricultural, industrial, and international trade features of Mexico, Central America, Caribbean America, and South America as they are related to development of the region. Applicable to the BG Perspective (general education) social sciences and international perspective requirements.

GEOG 3510(3)  
Ohio  
Geographic analysis of the physical, cultural, political, demographic, urban, and economic diversity of Ohio historically and at present. Problems, prospects, and its role in the United States and the world are examined.

GEOG 4000(3)  
Special Topics in Geography  
Experimental courses considered part of regular offering. May be repeated with departmental permission.

GEOG 4020(3)  
Regional Economic Geography  
Problems of regions, including topics such as urban, rural, and regional planning/land use, transportation, urban sprawl, suburbanization, and urban entrepreneurship. Emphasis on individual projects.

GEOG 4040(3)  
Climatology  
Fundamentals and applications; drought, water resources, human comfort, health, architecture; short- and long-term climatic changes.

GEOG 4130(3)  
Introduction to Remote Sensing  
Spring every other year. Principles and procedures used to obtain information about natural and cultural features through imagery derived from photographic, multispectral, thematic mapper and side-looking airborne radar sensor systems.

GEOG 4220(3)  
Computer Mapping  
Fall or Spring. Map construction and display of geographical data using the computer. Prior completion of CS 1000 or GEOG 3210 recommended. Extra fee.

GEOG 4240(4)  
Geographic Information Systems  
Collection, manipulation, integration and automated display of data with emphasis on geographic/spatial analysis. Three hours of lecture and three hours of lab. Prerequisite: GEOG 3210 or GEOG 4220 or consent of instructor. Credit allowed for no more than one: GEOL 4030, ENVS 4030, GEOG 4240. Extra fee will not apply to online course. Extra fee.

GEOG 4250(3)  
Applied Geographic Information Systems--Human Dimensions  
Spring every other year. Application of advanced GIS techniques to spatial analysis of human issues such as geodemographics, socio-economic, urban, and regional planning. Two lectures, one two-hour laboratory. Prerequisite: GEOG 4240 or GEOL 4030/ENVS 4030 or consent of instructor.

GEOG 4260(3)  
Urban Geography  
Spring. Character, distribution, and development of cities in the world, with emphasis on American cities. Topics include locational relationships with respect to land use, areas of poverty, economic bases, urban-rural interactions and delivery of urban services. Applicable to the BG Perspective (general education) social sciences requirement.

GEOG 4550(3)  
Global Atmospheric Problems  
Interrelationships between humans and atmospheric environments; implications of air pollution, acid rain, snow, floods, drought, temperature extremes and global warming. Prior completion of GEOG 1250 or GEOG 2130 or GEOG 3030 recommended.

GEOG 4570(3)  
Global Water Resources  
Analysis of the earth's water resources, surface water systems (drainage basins, rivers, lakes, reservoirs), distribution, supply demand, quality and hydrologic extremes. Prior completion of GEOG 1250 recommended.

GEOG 4890(3)  
Internship  
Fall, Spring. Provides practical experience in applied geography, such as land use planning; urban and rural planning; recreational, regional and environmental planning; and location of industrial, commercial and health service facilities. May be repeated. Only six hours may be applied to GEOG major or minor; additional hours are for general electives. Graded S/U.

GEOG 4900(1 - 3)
Special Problems in Geography
Readings and research on varied topics to suit needs of student. May be repeated up to 6 hours.

Subject: Geology

GEOL 1000(3)
Introduction to Geology
Fall, Spring, Summer. The earth; physical and historical geology; including economic, social and environmental aspects. Not open to geology majors and minors. Credit allowed for no more than one: GEOL 1000, GEOL 1010, GEOL 1040. Applicable to the BG Perspective (general education) natural sciences requirement. Approved for online delivery.

GEOL 1010(3)
Earth Systems Science
Survey of the connections, evolution and interactions between atmosphere, biosphere, hydrosphere, solid earth, and the universe. Two lectures and one two-hour laboratory. Appropriate for science education majors. Credit allowed for no more than one: GEOL 1000, GEOL 1010, GEOL 1040. Not applicable to the BG Perspective (general education) natural sciences requirement.

GEOL 1040(4)
Earth Environments
Fall, Spring, Summer. Introduction to the science of geology. Relationship of man to physical environment of the earth and its natural resources. Three lectures and one two-hour laboratory. Credit allowed for no more than one: GEOL 1000, GEOL 1010, GEOL 1040. Applicable to the BG Perspective (general education) natural sciences requirement. Extra fee.

GEOL 1050(4)
Life Through Time
Introduction to the origin, evolution, and extinction of major fossil groups in relation to a changing Earth through time. Three lectures and one two-hour laboratory. Applicable to the BG Perspective (general education) natural sciences requirement. Extra fee.

GEOL 1060(4)
Climate Change and the Frozen Earth
An introduction to the science of global climate change emphasizing research in Earth’s cold regions. Topics include past and future changes in the atmosphere, ocean circulation and sea-level change, the role of ice in the climate system, ice ages, and glaciers and other archives of past climate. Three lectures and one two-hour laboratory. Applicable to the BG Perspective (general education) natural sciences requirement. Extra fee.

GEOL 1070(3)
Geological Hazards
Study of natural hazards such as earthquakes, volcanic eruptions, landslides, floods and asteroid impacts. Emphasis is on the cause, prediction and effects of natural hazards and their impact on humans and the environment. Applicable to the BG Perspective (general education) natural sciences requirement.

GEOL 1200(3)
Geologic History of Man
Fall. Evolution, distribution, way of life and geologic history of prehistoric hominids. Applicable to the BG Perspective (general education) natural sciences requirement.

GEOL 1990(1 - 3)
Independent Study
On demand. Supervised study in Geology to meet student’s need for special exploration in areas not covered by regular courses; projects chosen in consultation with advisor, may include library, field, and/or laboratory work. For lower division students only. May be repeated for a total of three hours. Prerequisite: consent of instructor.

GEOL 2050(3)
Geologic History of Man
Fall. Evolution, distribution, way of life and geologic history of prehistoric hominids. Applicable to the BG Perspective (general education) natural sciences requirement.

GEOL 2150(3)
Geologic History of Dinosaurs
Spring. Evolution, ways of life and extinction of the Dinosauria; geologic history of vertebrates and dinosaurs in relation to a changing earth. Two lectures and one two-hour laboratory. Applicable to the BG Perspective (general education) natural sciences requirement. Extra fee.

GEOL 2500(5)
Field-based Physical Geology
Fall. Introduction to geologic materials, structures, and landforms. Geology of selected national parks and regional geologic hazards. Emphasis on scientific methods. Experience reporting the findings of experiments orally and in writing. Interdisciplinary approach combining social and geological sciences. Taught as a 9-week field/camping trip across the U.S.A. Corequisites: GEOL 2510, ACS 2520, and ENVS 2530. Prerequisite: permission of instructor. With GEOL 2510, satisfies the natural sciences lab sequence and general education requirements. Honors credit optional. Applicable to the BG Perspective (general education) natural sciences requirement. Extra fee.

GEOL 2510(5)
Field-based Historical Geology
Fall. Methods, concepts, and principles for interpreting Earth history in the field; interactions of tectonic, biological, and climatic processes through time; emphasis on examples found in North America. Experience with conducting and reporting the results of a geological mapping project orally and in writing. Taught as a 9-week field/camping trip across the U.S.A. Corequisites: GEOL 2500, ACS 2520, and ENVS 2530. Prerequisite: permission of instructor. With GEOL 2500, satisfies the natural sciences lab sequence and general education requirements. Honors credit optional. Applicable to the BG Perspective (general education) natural sciences requirement. Extra fee.

GEOL 3020(4)
Earth Materials I
Fall. Classification, identification, chemistry, association, economics and genesis of crystals, minerals and rocks. Three lectures and one two-hour laboratory. Prerequisites or corequisites: GEOL 1040, GEOL 3150, and CHEM 1250 or CHEM 1350.

GEOL 3030(4)
Earth Materials II
Spring. A continuation of GEOL 3020; identification, classification, chemistry, association and genesis of rocks. Three lectures and one two-hour laboratory. One field trip required. Prerequisite: GEOL 3020.

GEOL 3040(4)
Geology of the National Parks
U.S. regional geology as illustrated in the national park system. Three lectures and one two-hour laboratory. Prerequisite: GEOL 1000, GEOL 1010, GEOL 1040, or GEOL 2500.

GEOL 3060(4)
Rocks and Minerals
Study of minerals and rocks including their physical and chemical properties, modes of formation, and the information they provide about earth processes and earth history. Appropriate for science education majors. Two lectures and two two-hour laboratories. Not open to geology majors. Credit not given for GEOL 3020 and GEOL 3060. Prerequisite: GEOL 1000 or GEOL 1010 or GEOL 1040 or GEOL 2500.

GEOL 3090(4)
Earth Structures and Tectonics
Fall. Identification and interpretation of geologic structures; mechanics of rock deformation, fracturing and folding, plate tectonics and orogeny. Three lectures and one three-hour laboratory. Prerequisites: GEOL 3020, PHYS 2010 or PHYS 2110, and MATH 1290 or equivalent; or consent of instructor.

GEOL 3150(3)
Quantitative Methods in Geology
Uses of quantitative methods including summary statistics, regression analysis, and data visualization as applied to Geology. Presentation of research results required. Prerequisites: GEOL 1040 or GEOL 1050, MATH 1280, or consent of instructor. Corequisite: GEOL 3020.

GEOL 3160(4)
Sedimentation and Stratigraphy
Spring. Classification and origins of sedimentary rocks; depositional environments; stratigraphic principles and procedures. Three lectures and one two-hour laboratory. Prerequisites: GEOL 1050 and GEOL 3020.

GEOL 3220(3)
Environmental Geology
Spring, alternate years. Environmental aspects of geology, including natural hazards, resource exploitation, waste disposal, pollution and biogeochemical cycles. One half-day field trip required. Prerequisite: GEOL 1000, GEOL 1010, GEOL 1040 or GEOL 2500. Applicable to the BG Perspective (general education) natural sciences requirement.

GEOL 4010(4)
Economic Geology
Classification and genesis of metallic ore deposits illustrated by study of classic areas. Three lectures and one two-hour laboratory. Prerequisites: GEOL 3020 and GEOL 3090.

GEOL 4020(3)
Computer Applications in Geology
Methods for the retrieval, extraction and manipulation of geological information and numerical data using computers. Prerequisites: minimum of nine credit hours in GEOL and knowledge of a computer language; or consent of instructor.

GEOL 4030(4)
Geologic Information Systems
Collection, manipulation, integration and automated display of spatial data from various disciplines with particular emphases on environmental geology, resource management and geographic analysis. Credit allowed for no more than one: GEOL 4030, ENVS 4030, GEOG 4240.

GEOL 4050(3)
Volcanology
On demand. Study of volcanic phenomena; understanding eruptions and their products; impact on humans. Three lectures per week. Prerequisite: GEOL 3020 or consent of instructor.

GEOL 4100(4)
Geomorphology
Systematic study of surface processes and landforms; applications to environmental and historical geology. Three lectures and one two-hour laboratory. Two field trips required. Prerequisite: GEOL 1010, GEOL 1040, or GEOL 2500.

GEOL 4150(4)
Paleontology
Fall. Principles of paleontology; major groups of fossil animals. Three lectures and one two-hour laboratory. Field trips outside of class time required. Prerequisite: GEOL 1050 or consent of instructor.

GEOL 4190(3)
Vertebrate Paleontology
Fossil vertebrates and their morphology, classification and evolution. Two lectures and one two-hour laboratory. Prerequisite: GEOL 1000, GEOL 1010, GEOL 1050 or BIOL 1040.

GEOL 4250(3)
Micropaleontology
Classification, morphology, phylogeny and paleoecology of selected groups of microfossils. Two lectures and one two-hour laboratory. Prerequisite: GEOL 4150 or consent of instructor.

GEOL 4310(4)
Aqueous Geochemistry
Geochemistry of natural waters, including fluid/rock reactions, solution chemistry, solubility, and oxidation-reduction reactions. Three lectures and one three-hour laboratory. Prerequisites: GEOL 3020, MATH 1310 or MATH 1340 (may be taken concurrently) or consent of instructor.

GEOL 4320(4)
Solid Earth Geophysics
Gravity, magnetic and seismic properties of the earth; plate tectonics. Three lectures and one two-hour problem-solving laboratory. Prerequisites: GEOL 3090, PHYS 2010 or PHYS 2110, or consent of instructor.

GEOL 4400(4)
Geologic Remote Sensing
Use of remotely sensed multispectral data for geological applications. Data acquisition, image processing and interpretation. Recent advances in geologic remote-sensing research. Three lectures and one two-hour laboratory. Prerequisite: GEOL 3090.

GEOL 4450(4)
Surface Water Hydrogeology
Geological aspects of flowing water at the earth's surface, emphasizing open-channel hydraulics, flood analysis, sediment transport and water quality. Three lectures and one recitation section. Prerequisite: GEOL 3160.

GEOL 4460(4)
Groundwater Hydrogeology
Hydraulics of groundwater flow, hydrologic properties of geologic materials, evaluation of groundwater resources and contamination. Three lectures and one recitation section. Prerequisite: GEOL 3160.

GEOL 4700(1 - 3)
Readings in Geology
On demand. Supervised independent readings in an area of Geology. Does not satisfy the 4000-level elective requirement for Geology BS majors. May be repeated. Prerequisite: consent of instructor.

GEOL 4800(1 - 3)
Seminar in Geology
Study of selected topic. May be repeated. Prerequisite: consent of instructor.

GEOL 4850(1)
Current Topics in Geology
On demand. Current topics or issues in Geology. Does not satisfy the 4000-level elective requirement for Geology BS majors. May be repeated. Prerequisite: consent of instructor. Graded S/U.

GEOL 4900(1 - 3)
Independent Research in Geology
On demand. Individual work for student who has shown proficiency and marked degree of independence in work. Does not satisfy the 4000-level elective requirement for Geology BS majors. May be repeated. Prerequisite: consent of instructor.

GEOL 4930(6)
Field Experience
Summer only. Recognition and study of geologic materials, structures and landforms in the field. Written report required. Not open to B.S. geology majors. Prerequisites: GEOL 1040 and GEOL 1050, or GEOL 3040, or consent of instructor. Extra fee.

GEOL 4940(6)
Field Geology
Summer only. Principles and practices of field geology and geologic mapping. Final map and report required. Prerequisites: grade of C or better in both GEOL 3090 and GEOL 3160 or consent of instructor. Extra fee.

GEOL 4990(1 - 3)
Undergraduate Research Experience
Fall, Spring, Summer. Experience with conducting and reporting the results of an original research project on a topic of interest in the geological sciences. Reporting the results will be done as a written report and oral presentation. Prerequisite: consent of instructor.

Subject: German

GERM 1010(4)
Elementary Language and Culture I
Fall, Spring. Cultural approach to beginning language study in the four skills: listening, speaking, reading, writing. Four class periods and laboratory practice each week. Applicable to the BG Perspective (general education) humanities and arts and international perspective requirements.

GERM 1020(4)
Elementary Language and Culture II
Fall, Spring. GERM 1010 continued. Four class periods and laboratory practice each week. Prerequisite: GERM 1010 or one year of high school German, or by placement. Applicable to the BG Perspective (general education) humanities and arts and international perspective requirements.

GERM 1170(2)
Beginning Conversational German I
Fall. Basic conversational German. Suggested as a supplemental course to accompany GERM 1010 or may be taken independently. Not open to students who have completed GERM 1020.

GERM 1180(2)
Beginning Conversational German II
Spring. Basic conversational German continued. Prerequisite: GERM 1170, GERM 1010 or permission of instructor. Not open to students who have begun or completed GERM 1010.

GERM 1030(3)
Intermediate German I
Fall, Spring. Grammar review; development of the four skills. Three class periods and laboratory practice each week. Prerequisite: GERM 1020 or two years of high school German, or by placement. Applicable to the BG Perspective (general education) humanities and arts and international perspective requirements.

GERM 2020(3)
Intermediate German II
Fall, Spring. GERM 2010 continued. Three class periods and laboratory practice each week. Prerequisite: GERM
2010 or three years of high school German, or by placement. Applicable to the BG Perspective (general education) humanities and arts and international perspective requirements.

**GERM 2170(2)**
Intermediate Conversational German I
Fall. Practice in conversation at the intermediate level. Suggested as supplemental course to accompany GERM 2010, or may be taken independently. Prerequisite: GERM 1020 or permission of instructor.

**GERM 2180(2)**
Intermediate Conversational German II
Spring. GERM 2170 continued. Prerequisite: GERM 2010 or permission of instructor.

**GERM 2200(1 - 5)**
Studies Abroad
Literary, linguistic, or cultural studies completed as part of an approved study abroad program. May be repeated with different topics.

**GERM 2310(3)**
Intermediate Reading
Development of reading skills in expository prose from various fields (scientific, technical, commercial and others). Vocabulary building, analysis of syntax and grammar for reading purposes. Prerequisite: GERM 1020 or equivalent.

**GERM 2600(3)**
Modern German Literature in Translation
Readings in English of internationally known authors from German-speaking countries. May include Kafka, Mann, Hesse, Brecht, Grass and others. Course does not count toward a German major or minor. Applicable to the BG Perspective (general education) humanities and arts and international perspective requirements.

**GERM 3000(1)**
Introduction to Study Abroad
Spring. Preparation for study abroad. Limited to Salzburg and German Exchange Program participants. Course does not count toward German major or minor. Graded S/U.

**GERM 3110(3)**
Introduction to German Literature
Fall alternate years. Approaches to reading and interpreting representative works, primarily 20th century; development of reading comprehension, vocabulary skills, speaking ability (discussion), and interpretive skills based primarily on 18th- and 19th-century texts. Also offered every fall in Salzburg. Prerequisite: GERM 2020 or permission of instructor.

**GERM 3130(3)**
German Literature in Context
Fall alternate years. German literature in historical and social context based on topics such as crime, love, or mythology. Development of reading comprehension, vocabulary skills, speaking ability (discussion), and interpretive skills based primarily on 18th- and 19th-century texts. Also offered every spring in Salzburg. Prerequisite: GERM 2020 or permission of instructor.

**GERM 3150(3)**
German Culture and Civilization
Cultural-historical treatment of the social, intellectual and artistic life of the German-speaking peoples from medieval times to World War II. Lectures, audio-visual presentations and readings in English.

**GERM 3160(3)**
Contemporary Germany
Lecture-reading course in English. Division of Germany after World War II; rebuilding and development of the two German states since 1949; political, economic and social systems, inter-German relations, patterns of daily living; revolution in East Germany and process of unification.

**GERM 3170(2 - 4)**
Composition and Conversation I
Fall. Extensive practice in speaking and writing German. (May be repeated for credit in AYA Austria Program.) Prerequisite: GERM 2020 or by placement.

**GERM 3180(2 - 4)**
Composition and Conversation II
Spring. GERM 3170 continued. (May be repeated for credit in AYA Austria Program.) Prerequisite: GERM 3170 or permission of instructor.

**GERM 3200(1 - 5)**
Studies Abroad
Literary, linguistic, or cultural studies completed as part of an approved study abroad program. May be repeated with different topics.

**GERM 3310(1 - 3)**
Workshop in Translation
Spring. Small group work in German to English translation of scientific, technical or business writing or other types of expository prose in the student's specialty. May be repeated to six hours with different projects. Prerequisite: GERM 2010, GERM 2310 or permission of instructor.

**GERM 3600(3)**
Topics in German Language, Thought or Culture
Topic chosen to meet curriculum needs and student requests. May be repeated to six hours with different topics.
GERM 4000(2 - 4)
Seminar in German Studies
Spring. Capstone seminar in German on topic from literature or culture. Approaches and tools of German studies with German language skills development. Seminar paper in German required. Prerequisites: GERM 3110 or GERM 3130 and GERM 3180 or permission of instructor.

GERM 4030(3)
Women and the Third Reich
Race, ethnicity, class, religion, and sexual orientation in the context of the Third Reich using historical, sociological, autobiographical, and fictional texts written by or about women. Readings and discussion in English.

GERM 4040(3)
German Literature and Music
Relations between German literature and music. Rotating topics may include the texted works of one composer (Schubert, Wagner), musical settings of the works of one author (Goethe, Schiller, Heine), or music criticism (Schumann, Hoffmann). Readings and class conducted in English, with opportunity to read in German. Prerequisite: junior standing or permission of instructor.

GERM 4130(3)
Topics in 18th/19th-Century German Literature
Spring alternate years. Advanced study of German literature in German; topics may focus on a genre, author, or theme. Continued work on reading, writing, vocabulary, speaking; course and readings entirely in German. Prerequisite: GERM 3130 or GERM 3170 or permission of instructor.

GERM 4140(3)
Topics in 20th Century German Literature
Spring alternate years. Advanced study of German literature in German; topics may focus on a genre, author, or theme. Continued work on reading, writing, vocabulary, speaking; course and readings entirely in German. Prerequisite: GERM 3110 or GERM 3170 or permission of instructor.

GERM 4150(3)
The German Film
Cultural and literary aspects of German film; emphasis may be on important developments in German filmmaking, thematic aspects of film or on interrelationships between literary and cultural phenomena and the film. Two class meetings and required film screening.

GERM 4160(3)
Contemporary Austria
Fall. Offered in AYA Austria Program. Survey of political and social life, education, mass media, the arts and cultural life in present-day Austria. Guest lectures, discussion sessions, field trips. Prerequisite: admission to AYA program.

GERM 4170(2 - 4)
Advanced Composition and Conversation
Fall. Development of increased facility in speaking and writing. (May be repeated for credit in AYA Salzburg Program.) Prerequisite: GERM 3180 or permission of instructor.

GERM 4180(2 - 4)
Stylistics, Syntax, and Structure of German
Spring. Practice and problems of writing style and syntax. Descriptive study of grammatical structures, contrastive analysis of English and German. (May be repeated for credit in AYA Salzburg Program.) Prerequisite: GERM 3180 or permission of instructor.

GERM 4190(3)
German Drama Workshop
Practical advanced linguistic training through active participation in theatrical projects; advanced phonetics; methods of utilizing dramatic productions as part of foreign language instruction. Prerequisite: permission of instructor.

GERM 4210(3)
Business German
Fall. Offered in AYA Austria program. Acquisition and application of German vocabulary in business and economics. Topics include stock market, international business, and how to read the business section of a newspaper.

GERM 4310(1 - 3)
Advanced German-English Translation
Analysis and application of translation techniques; attention to levels and areas of style. Intensive general practice followed by work on individual projects. May be repeated to six hours with different projects. Prerequisites: GERM 3170 or permission of instructor.

GERM 4320(1 - 3)
Advanced English-German Translation
Analysis and application of translating techniques; expansion on working vocabulary and idiomatic basis in German. Treatment of structural differences between languages through error analysis. General practice; individual projects. May be repeated to six hours. Prerequisites: six hours from GERM 3170 and/or GERM 3180 and/or GERM 3310.

GERM 4380(1 - 4)
Selected Topics in German
Topic chosen from literature, culture or language to meet curriculum needs and student requests. May be repeated with different topics.

GERM 4420(3)
Introduction to German Linguistics
Derivation of modern Germanic languages from Proto-Indo-European. Classification and history of the Germanic language group. Development of the German language to New High German. Prerequisites: GERM 3180 or permission of instructor.
GERM 4910(1 - 3)
Studies in German
Independent study project for advanced students in German. May be repeated to six hours with different projects. Prerequisites: arrangement with instructor and consent of department chair prior to registration.

Subject: Gerontology
GERO 1010(3)
Aging, the Individual and Society
Fall, Spring, Summer on demand. Study of aging from a multidisciplinary perspective; focus on the way people are thought about, evaluated and treated on the basis of their age. Applicable to the BG Perspective (general education) social sciences requirement. Approved for Distance Education.

GERO 3010(3)
Aging and Ethnicity in the United States
Fall. Examination and analysis of cultural diversity and ethnicity in the older population residing in the United States. Applicable to the BG Perspective (general education) cultural diversity in the United States requirement.

GERO 3250(3)
Applied Social Gerontology
Spring. An examination of social and political realities confronting older adults. Social issues such as ageism, homelessness, and poverty as they relate to the older adult are examined and issues affecting diverse groups of elders are emphasized. In addition, through service-learning activities students will learn a variety of practice concepts, skills, and models in gerontological case management. Prerequisite: GERO 1010.

GERO 3300(3)
Psychosocial Aspects of Aging
Spring. Advanced study of psychosocial aspects of aging that combines traditional classroom instruction with structured interaction with older adults in the community. Prerequisite: GERO 1010 or equivalent.

GERO 4020(3)
Health and Aging
Spring. Demographic characteristics, health status of older adults; impairments and chronic conditions most typically demonstrated by older adults; pertinent medical terminology; formal and informal supports available to address the health care needs of older adults. Prerequisites: AHS/GERO majors and GERO minors only; GERO 1010 and BIOL 2050.

GERO 4050(3)
Cross-Cultural Aging
Summer. Cross-cultural analysis of the aging process and the problems of the aged throughout the world. Applicable to the BG Perspective (general education) social sciences and international perspective requirements.

GERO 4100(3)
Social Policy & Programs
Fall. An evaluation of social policy and the implications for the provision of programs and services for older adults in the United States. Administration of human service agencies with aging clients. Goal setting, staffing, evaluation, budgeting and organizational structures. Prerequisites: GERO 1010; GERO majors and minors only.

GERO 4110(3)
Principles of Nursing Home Administration
Spring. A capstone course for prospective nursing home administrators to assist them in the integration and concepts necessary for successful operation of a facility. Required of all gerontology majors who have selected the nursing home administration option. Open only to those students who have achieved senior standing in the nursing home administration option.

GERO 4200(3)
Program Evaluation and Grant Writing
Spring. Funding potential, methods, design, evaluation and proposals in human service agencies with a special emphasis on grant writing. Prerequisites: GERO 1010 and GERO 4100; GERO majors and minors.

GERO 4220(4)
Research in Social Gerontology
Fall. Logic of scientific inquiry; the complexity of gerontologic research; critical evaluation of measures, methods used in gerontologic research; hands-on experience in data analysis, interpretation and presentation. Prerequisites: GERO 1010; MATH 1150, PSYC 2700 or SOC 3690; AHS/GERO majors and GERO minors only.

GERO 4400(3)
Seminar in Gerontology
Spring. Interdisciplinary study of special topics in gerontology. May be repeated by consent of the director of the gerontology program. Restriction: advanced gerontology majors.

GERO 4600(3)
Mental Health and Aging
Spring. An introduction into the prevention and treatment of late-life mental disorders. The focus is on the continuum of mental health needs, including promotion of optimal mental health as people age, prevention and early intervention in mental disorders, culturally responsive assessment of mental disorders, and effective treatment of acute distress and severe mental illness. Prerequisites: GERO 1010; GERO 3300; Gero majors and minors only.

GERO 4700(1 - 3)
Special Topics in Gerontology
On demand. Independent study on subject matter related to gerontology not otherwise offered. May be repeated. Prerequisite: consent of program director.

GERO 4910(1 - 20)
Practicum in Gerontology
Fall, Spring, Summer. Experience in working under supervision in selected agencies providing services to the
aged. Emphasis on practice rather than observation. May be repeated. Prerequisites: enrollment in gerontology program or permission of program director; junior or senior standing; 2.50 GPA prior to registration. Graded S/U.

GERO 4930(1)
Practicum Seminar
Fall, Spring, Summer. Analysis of problems and experiences encountered in practicum. Prerequisites: permission of program director and GERO 4910. Graded S/U.

Subject: German Russian East Asian
GREA 2500(1 - 4)
Topics in Language and Culture
Small group and individualized work on special topics. May be repeated if topics differ.

Subject: Greek
GRK 1010(4)
Elementary Greek I
Spring. Introduction to ancient Greek with a focus on listening, reading and writing.
GRK 1020(4)
Elementary Greek II
Summer or Fall. Introduction to ancient Greek with a focus on listening, reading and writing. Prerequisite: GRK 1010 or one year of ancient Greek in high school.
GRK 2010(3)
Intermediate Greek I
Fall. Grammatical review and reading of ancient Greek texts. Prerequisite: GRK 1020 or two years of ancient Greek in high school. Applicable to the BG Perspective (general education) humanities and arts and international perspective requirements.
GRK 2020(3)
Intermediate Greek II
Spring. Grammatical review and reading of ancient Greek texts. Prerequisite: GRK 2010. Applicable to the BG Perspective (general education) humanities and arts and international perspective requirements.
GRK 3610(3)
Intermediate Greek Literature I
Fall. Grammatical review and advanced reading of ancient Greek texts. Prerequisite: GRK 2020 or consent of section leader and instructor.
GRK 3620(3)
Intermediate Greek Literature II
Spring. Grammatical review and advanced reading of ancient Greek texts. Prerequisite: GRK 2020 or consent of section leader and instructor.
GRK 4700(1 - 3)
Readings in Greek Literature
On demand. Advanced reading for students wishing to study special period or great author. Prerequisites: GRK 3620 or consent of Classical Studies section leader and instructor. May be repeated with different topics up to 6 credits.

Subject: General Studies Writing
GSW 1100(5)
Intensive Introduction to Academic Writing
Fall, Spring. Basic expository writing; emphasis on organizing and developing essays of at least 800 words for college-educated audiences. Additional emphasis on development of skills in sentence structure, usage, and mechanics. Placement through pretesting. Students must complete course and program portfolio assessment successfully to receive an S grade and be eligible to enroll in GSW 1120. Students who receive a No Credit grade must enroll in GSW 1110. No more than 6 hours from GSW 1100, GSW 1110, and GSW 1120 may be applied toward graduation. Graded S/No Credit. Extra fee.
GSW 1110(3)
Introduction to Academic Writing
Fall, Spring, Summer. Basic expository writing; emphasis on organizing and developing coherent essays of at least 800 words for college-educated audiences. Placement through pretesting or No Credit grade in GSW 1100. Students must complete course and program portfolio assessment successfully to receive an S grade. No more than 6 hours from GSW 1100, GSW 1110, and GSW 1120 may be applied toward graduation. Graded S/No Credit. Extra fee.
GSW 1120(3)
Academic Writing
Fall, Spring, Summer. Expository writing including research paper; emphasis on analytical writing based on critical reading. Placement through pretesting or successful completion of GSW 1100 or GSW 1110. Students must complete course and program portfolio assessment successfully to receive a passing grade. Graded ABC/No Credit. Extra fee.

Subject: Human Development & Family Studies
HDFS 1050(3)
Human Development across the Lifespan
Fall, Spring. Individual and family developmental theories, examination of major domains of knowledge in human development, personal application.
HDFS 1060(3)
Families, Communities, and Schools
Fall. Introduction to systems theory, ecological contexts, and interrelations among families, cultures, communities, and schools. Review of employment opportunities in human and educational services.
HDFS 1070(3)
Black Families in America
Fall, Spring. Living patterns of the American black family: historical development, present status, strengths, problems and prognosis. Applicable to the BG Perspective (general education) cultural diversity in the United States requirement.

**HDFS 2020(3)**
Contemporary Marriages and Families
Fall, Spring. Analysis of trends in marriage and family relationships in modern society, including family processes through the life cycle. Applicable to the BG Perspective (general education) social sciences requirement.

**HDFS 2200(3)**
Infant and Toddler Development
Fall. Growth and development of infants and toddlers from conception to two years. Developmental theories and characteristics. Implications for enhancing development.

**HDFS 2210(3)**
Child Development
Fall, Spring. The course addresses cognitive, social, emotional, and physical development of children from conception through the middle years. Developmental theory and methodology will be addressed as children growing up in diverse families, communities, and cultural contexts are examined.

**HDFS 2240(3)**
Program Planning for Young Children

**HDFS 2250(3)**
Family Systems & Community Partnerships
Fall, Spring. This course uses ecological systems theory as a foundation for understanding family dynamics, parenting and family and cultural diversity as it applies to early childhood education. This knowledge will be applied to family, school, and community partnerships.

**HDFS 2280(3)**
Preadolescent and Adolescent in Family and Community
Fall. Development and socialization of preadolescents and adolescents; youth growth, culture and potential problems. Focus on family and peers. A review of research relevant for intervention or service programming. Prerequisite: HDFS 1050 or consent of instructor.

**HDFS 2290(3)**
Adult Development and Aging
Fall. Introduction to current theory and research related to adult development and aging from a family development and life course perspective. Prerequisite: HDFS 1050 or consent of instructor.

**HDFS 3010(3)**
Teaching Young Children I: Preschool
Fall, Spring. Historical and philosophical foundations of prekindergarten, program planning, learning environments, methods, and materials for enhancing development of preschool children with diverse cultural, family, and developmental characteristics. Prerequisite: HDFS 2210. C/F hrs.: 30.

**HDFS 3030(3)**
Approaches to Pre-Kindergarten Teaching and Learning
Fall, Spring. A survey of theoretical foundations and practical applications of play based pre-kindergarten program planning, including the provision of learning environments, instructional methods, and materials for enhancing development of pre-kindergarten children with diverse cultural, family, and developmental characteristics. Transportation required. C/F hours: 20. Prerequisites: HDFS 2210 and EDTL 2040.

**HDFS 3050(3)**
Family Resource Management
Spring. Families' allocation of human and non-human resources. Prerequisites: HDFS 1060, HDFS 2020 and sophomore status.

**HDFS 3200(3)**
Pre-Kindergarten Practicum
Fall, Spring. Supervised participation with pre-kindergarten children in a pre-kindergarten setting. Weekly seminar. Transportation required. C/F hours: 120. Prerequisites: HDFS 3030 with C or better, admission to early childhood education program. Graded S/U.

**HDFS 3220(3)**
Child Development Practicum
Fall, Spring. Supervised participation with preschool children. One hour seminar and five hours of lab. Must attend meeting during registration to be enrolled. Prerequisites: HDFS 2210 and HDFS 3010; admission to early childhood program. C/F hrs: 90. Transportation required. Extra fee.

**HDFS 3250(3)**
Children and Families Under Stress
Fall. Stresses related to children, adolescents, and families throughout the life cycle. Emphasis on theory and research related to family role(s) and coping strategies. Prerequisites: HDFS 2020 and sophomore status.

**HDFS 3270(3)**
Family Interaction
Spring. Course focuses on interaction processes within family systems and how these are affected by larger social systems. Emphasis on principles and patterns of family communication, theories of family functioning, and family conflict management. Prerequisites: HDFS 1050 and HDFS 2020 or consent of instructor.

**HDFS 3900(3)**
Professional Development in Human Development and Family Studies
Fall, Spring. Using a human development and family life perspective, professional development, ethics, and policy issues will be examined in a seminar format. Recommended that this course be taken the semester prior to the internship, HDFS 4890. Prerequisites: HDFS 1050, HDFS 2020, junior status.
HDFS 4070(3)
Research in Human Development and Family Studies
Spring. Research methodology: completing a research project on a topic of the student's choice in the area of human development and family studies. Prerequisite: junior or senior standing.

HDFS 4080(3)
Family Diversity

HDFS 4100(3)
Child and Family Policy
Fall. The identification, development, implementation, and evaluation of public, private sector, and social policies that pertain to children and families. Prerequisites: HDFS 1060 and Junior Status.

HDFS 4110(3)
Parenting Processes
Spring. Theories and processes of parenting with an emphasis on the inter-personal dynamics of parent-child relationships. Prerequisites: HDFS 1050, HDFS 2020.

HDFS 4200(3)
Nurturing Positive Behavior
Fall, Spring. The course explores theoretical explanations, developmental, individual, and contextual factors influencing social learning in young children. Implications for individual and group guidance of young children as well as interventions that facilitate learning, independence, self-control, and positive social interactions are covered. Must be taken as part of ECE Field Block I. Transportation required. Prerequisite: admission to early childhood education program.

HDFS 4210(3)
Parent/School/Community Partnerships
Fall, Spring. Theories of parenting and interactive effects of parent-child relationships. Roles of parents and professionals including strategies for partnerships with families, schools, and community services.

HDFS 4220(3)
Cognitive Development of the Young Child
Contemporary theories of intellectual development of young children; research pertaining to specific concept areas and the development of related experiences. Prerequisite: HDFS 2200 or HDFS 2210 or consent of instructor.

HDFS 4230(3)
Organisation of Programs for Young Children
Spring. Factors in organization and administration of programs for young children. Prerequisite: HDFS 3220 or consent of instructor. C/F hrs.: 20.

HDFS 4240(3)
Introduction to Marriage and Family Counseling
Spring. Marriage and family counseling, including professional issues, major theories and techniques, introduction to family counseling skills. Prerequisites: HDFS 1050 and HDFS 3020 or consent of instructor.

HDFS 4280(3)
Sexuality in Human Development and Family Studies
Analysis of sexuality through the lifespan and within the context of family interaction. Focus on process of sexual development and on relationship dynamics. Intended for students with backgrounds in sexual physiology and the social-psychological aspects of human sexuality. Not open to students with credit for HP 3380.

HDFS 4290(3)
The Family in the Middle and Later Years
Spring. The family in the middle and later years, with emphasis on relationship between spouses, and with children and grandchildren. Identification and critical analysis of factors associated with success and problem areas for such families.

HDFS 4300(3)
Family Life Programming and Evaluation
Fall, Spring. Examine family life education programs and practices along with the various dimensions of an educator's role. A critical appraisal of students' professional competency to teach family life education material will also be completed. Prerequisite: Junior Status.

HDFS 4890(7 - 12)
Internship
Fall, Spring, Summer. Internship in a professional environment related to human development and family studies with corresponding course work focusing on professional development and ethics. Internship placement approved individually. Prerequisites: HDFS 3900, minimum of 24 HDFS content hours, senior standing, 2.25 GPA. Graded S/U.

HDFS 4910(1 - 7)
Prekindergarten Teaching Practicum
Fall, Spring. Classroom teaching in a prekindergarten. Full-time with supervision, following the calendar and hours of school placement. Transportation required. C/F hours: 40 hours per week. Prerequisites: Admission to the early childhood education program, completion of Field Block I and II courses with a C or better in graded coursework and an S in HDFS 3200 and EDTL 3200. Co-requisite: EDTL 4800. Graded S/U. May be repeated. College/program eligibility requirements. Extra fee.

Subject: Health & Human Services
HHS 1000(1 - 5)
Seminar Health and Human Services
On demand. Interdisciplinary study of special health or human service topics. May be repeated. Prerequisite: consent of dean's office.
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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Description</th>
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<tbody>
<tr>
<td>HHS 3950(1 - 4)</td>
<td>Workshop on Current Topics in Health and Human Services</td>
<td>On demand. Current topics and issues in health and human services areas. May be repeated if topics differ, with approval of program adviser.</td>
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<tr>
<td>HHS 4400(1 - 5)</td>
<td>Seminar Health and Human Services</td>
<td>On demand. Interdisciplinary study of special health or human service topics. May be repeated. Prerequisite: consent of dean's office.</td>
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**Subject: History**

**HIST 1510(3)**  
World Civilizations  
Fall, Spring, Summer. Comparative study of how and why economic, social, political and intellectual factors shaped and defined the history of selected Western and non-Western civilizations in the ancient and medieval periods. Applicable to the BG Perspective (general education) social sciences and international perspective requirements.

**HIST 1520(3)**  
The Modern World  
Fall, Spring, Summer. Comparative study of how and why selected economic, social, political and intellectual revolutions of the modern world have transformed and are shaping contemporary European and non-Western cultures. Applicable to the BG Perspective (general education) social sciences and international perspective requirements.

**HIST 1800(3)**  
Asian Civilizations  
Fall, Spring. Interdisciplinary study of Asian civilizations, such as China, Japan, Korea and India; emphasis on how and why socio-economic, political and intellectual developments shaped traditional cultures of Asia and transformed modern Asia into the fastest-growing region of the world. Credit allowed for only one of ASIA 1800, HIST 1800. Applicable to the BG Perspective (general education) social sciences and international perspective requirements.

**HIST 1910(2 - 3)**  
Special Studies in History  
On demand. Study of selected topics, methods, or subject areas. May be repeated if topics differ.

**HIST 2050(3)**  
Early America  
Fall, Spring, Summer. Selected constitutional, intellectual, political and social developments that defined and shaped America between its first European settlement and the end of Reconstruction. Applicable to the BG Perspective (general education) social sciences requirement.

**HIST 2060(3)**  
Modern America  
Fall, Spring, Summer. How and why selected economic, intellectual, political and social developments transformed post-Civil War America and shaped 20th-century American society. Applicable to the BG Perspective (general education) social sciences requirement.

**HIST 2910(2 - 3)**  
Special Studies in History  
On demand. Study of selected topics, methods, or subject areas.

**HIST 3010(3)**  
American Military History  
Summer. Development of American military institutions, policies, strategy, tactics from American Revolution to present.

**HIST 3030(3)**  
World War II  
Fall, Summer on demand. Background and causes of the war; the course, conduct and consequences of the struggle in Europe and Asia with special attention to strategy, technology, diplomacy and politics.

**HIST 3040(3)**  
The Bible as History: The New Testament  
On demand. Based on modern Biblical scholarship; analyzing the New Testament as a historical text reflecting the cultural matrix of Greco-Roman Palestine, conveying the eschatological message of Jesus through his disciples and maneuvering the evangelical mission of the early Christian church.

**HIST 3050(3)**  
The Bible as History: The Old Testament  
On demand. Major problems relating to text, content and context of the Old Testament as historically interpreted in modern Biblical scholarship with special attention to authenticity of evidence, integrity of explanation and continuity of experience found in Bible.

**HIST 3060(3)**  
History of Ohio  
Spring. Precolonial background, early exploration, settlement, Ohio's place in national development in the 19th and 20th centuries.

**HIST 3090(3)**  
Latin America Before Independence  
On demand. The Pre-Columbian era; European discovery and conquest; the colonial era; wars of independence. Special attention is given to the role of indigenous and European cultures in shaping Latin American development.

**HIST 3100(3)**  
Modern Latin America  
Fall, Spring, Summer on demand. Common and unique social, economic, political and intellectual features of
Latin American nations and Latin America's role in world affairs. Applicable to the BG Perspective (general education) social sciences and international perspective requirements.

HIST 3110(3)
United States-Latin American Relations, 1810-Present
On demand. Development of the Western Hemisphere idea, Panamericanism, Dollar Diplomacy, the Good Neighbor Policy, cooperation in World War II, the Cold War, the role of multinational corporations and U.S. response to social change in Latin America. Applicable to the BG Perspective (general education) social sciences and international perspective requirements.

HIST 3140(3)
Black Religion and Culture
Spring. Thematic history of the Black church from its African and British colonial roots to 1968. Focuses on reciprocal dynamics between church and community/state, including factors of race, ethnicity, gender and class.

HIST 3150(3)
Slavery in the Americas
On demand. African slave trade and various slave societies to which that traffic gave birth in the Western hemisphere. Emphasis on Cuba, Jamaica, Brazil and the American South.

HIST 3170(3)
African Cultures and Societies
Fall. This is an introductory course on Africa from the earliest times through the colonial and modern eras. Themes include origins, myths and stereotypes, artistic expressions and cultural values, socio-political and economic development, colonial experience and contemporary conditions. Credit allowed only for one of HIST 3170, ETHN 3170.

HIST 3190(3)
Black Religion and Culture
Fall. This is an introductory course on Africa from the earliest times through the colonial and modern eras. Themes include origins, myths and stereotypes, artistic expressions and cultural values, socio-political and economic development, colonial experience and contemporary conditions. Credit allowed only for one of HIST 3170, ETHN 3170.

HIST 3200(3)
Women in American History
Spring. Women’s experience in America from colonial period to modern times with emphasis on changes in women’s working, family, sexual and political lives.

HIST 3270(3)
Women in Modern Europe
Fall alternate years. Cross-listed with women’s studies as WS 3270. Examination of women in Europe since 1750. Emphasis on changes in women's working, family, sexual and political lives in conjunction with Europe's economic and political modernization. Credit not given for both WS 3270 and HIST 3270.

HIST 3370(3)
The Vietnam War
Fall. The American experience in Vietnam from several perspectives: origins of the war and U.S. escalation; media coverage, public opinion and anti-war movements; U.S. withdrawal and communist victory; the war in retrospect as seen in American popular culture, political debate and foreign policy.

HIST 3810(3)
United States and Asia
On demand. U.S. relations with China, Japan, India and southeast Asia in the 20th century; interaction of domestic politics and foreign policy; Asian nationalism, militarism, communism; America's involvement in wars and peace-making.

HIST 3820(3)
Chinese Civilization
On demand. History of Chinese dynasties, from ancient to modern times. Emphasis on cultural, social-economic and political development of the world's oldest continuous civilization before the early 20th century.
Applicable to the BG Perspective (general education) social sciences and international perspective requirements.

**HIST 3840 (3)**
**Korean Civilization**
On demand. History of Korea from ancient to modern times; emphasis on cultural, social-political and economic development of the Korean people. Importance of Korean tradition and transformation for our understanding of East Asia.

**HIST 3910 (1 - 3)**
**Special Studies in History**
On demand. Content and theme vary with instructor. Designed to meet needs and interest of nonmajors. Course may be taken more than once for credit if topics differ.

**HIST 4000 (2 - 3)**
**Topics in History**
On demand. Study of selected topics or subject areas. Course may be taken more than once for credit if topics differ.

**HIST 4010 (3)**
**Caesar and Christ: Social Worlds of Late Antiquity and Early Christianity**
On demand. Basic issues and problems involved in tensions and conflicts between pagans and Christians that were eventually accommodated in the 4th century AD; social disaffection, political resistance and cultural alienation.

**HIST 4020 (3)**
**Colonial Africa**
Fall. This course examines the social-cultural, political and economic transformation that occurred in Africa in the nineteenth and twentieth centuries. Themes such as precolonial African traditional institutions, the slave trade, societies and revolutions, legitimate commerce, European imperialism, colonial rule, nationalism, decolonization and neo-colonialism will be considered. Credit allowed only for one of HIST 4020, ETHN 4020.

**HIST 4030 (3)**
**Contemporary Africa**
Spring. This course focuses on selected themes and case studies in contemporary African affairs from 1960 when most African countries gained their independence to the present. Themes to be examined include the nature of freedom which African countries regained from their European colonizers; ethnicity and the task of nation-building; and social, economic and political changes since independence. Credit allowed only for one of HIST 4030, ETHN 4030.

**HIST 4040 (3)**
**Africa and World Politics**
Spring. This course examines how both domestic and international issues impinge on Africa. Selected themes and case studies to be considered include the slave trade, European exploration and political aggression, World Wars and implications, Cold War and its aftermath, and South Africa and apartheid; case studies such as the crises in Rwanda, Liberia, Somalia, Sierra Leone and their international implications will be examined. Credit allowed only for one of HIST 4040, ETHN 4040.

**HIST 4050 (3)**
**Modern China**
Spring. Major political, economic, and social developments from the mid-19th century to the present; transformation from feudalism to modern nation state, political parties, industrialization and economic development, science and technology, cultural change, imperialism and militarism, the Pacific War, post-war economic growth, and U.S. - Japanese relations.

**HIST 4110 (3)**
**Modern Mexico**
Fall. Analysis of the first Latin-American state to experience political, social and economic revolution in the 20th century; causes of the revolution, leaders and institutions produced; emergence of Mexico as a relatively stable and progressive state. Applicable to the BG Perspective (general education) social sciences and international perspective requirements.

**HIST 4130 (3)**
**Caribbean and Spanish Main**
On demand. Political, economic and social development of Greater Antilles and Spanish Main from 17th to 20th centuries; war and trade, slavery, revolution, caudillism and communism in the Caribbean.

**HIST 4140 (3)**
**Canada**
Spring. European colonial rivalry, problems of European-settled colonies, emergence of colonial self-government, confederation movement, search for national identity, nature of commonwealth nation, role as mediator in Anglo-American relations, importance as independent neighbor.

**HIST 4150 (3)**
**Spain and Portugal**
On demand. Political, economic and social development of Iberian peninsula from invasion of Moors to 20th century dictators; reconquest, reign of Hapsburgs, Spanish Civil Wars, regimes of Franco and Salazar.
HIST 4210(3)
American Colonial History, 1492-1763
On demand. European background of American history, establishment of European settlements and institutions, emergence of colonial culture, conflict between France and England for the New World.

HIST 4220(3)
American Revolutionary Era, 1763-1789

HIST 4250(3)
Early National U.S., 1789-1848
Fall. Development and growth of American social, political and economic institutions from the ratification of the Constitution to the Mexican War. Topics include the emergence of new ideologies of race and gender, the market revolution, slavery and the Old South, antebellum religion and reform.

HIST 4260(3)
Civil War and Reconstruction, 1861-1877
Spring. Political, economic and cultural conditions during the War; resulting problems to peoples and governments of both sections continuing through postwar period.

HIST 4280(3)
America Becomes Modern: 1877-1917
On demand. How and why the United States was transformed into an urban-industrial society and the consequences of this transformation for American culture, society and politics.

HIST 4290(3)
America Comes of Age: 1917 - 1945
On demand. Why and how the U.S. became a great, and then a global power. The new "associational" state, World War I and World War II, consumer culture, the "new" woman, the Great Depression. Applicable to the BG Perspective (general education) social sciences requirement.

HIST 4300(3)
U.S. Since 1945: Affluence and Anxiety
Spring. U.S. response to international problems since WWII with emphasis on the Cold War rivalry with the Soviet Union and China, the rise of the Third World, the wars in Korea, Vietnam, and the Persian Gulf, and U.S. involvement in Asia, the Middle East, Latin America, and Africa.

HIST 4310(3)
Aspects of African American History
Fall, Summer on demand. History of African descendants in the United States, focusing on social, political and cultural issues pertinent to the African American experience, from the African background to the present. Applicable to the BG Perspective (general education) cultural diversity in the United States requirement.

HIST 4330(3)
American Constitutional History
On demand. Development of constitutional law and institutions from the framing of the Constitution in 1787 to the present, with special attention to issues of federalism, civil rights and liberties, government regulatory authority and the role of the Supreme Court.

HIST 4350(3)
United States and the World, 1890-1945
Fall alternate years. United States' emergence as a world power from the expansion of the late nineteenth century to World War II, with attention to political, economic, and cultural components of U.S. foreign policy during this period.

HIST 4390(3)
United States and the World: The Cold War Era
Spring. U.S. response to international problems since WWII with emphasis on the Cold War rivalry with the Soviet Union and China, the rise of the Third World, the wars in Korea, Vietnam, and the Persian Gulf, and U.S. involvement in Asia, the Middle East, Latin America, and Africa.

HIST 4410(3)
Ancient Greece (1000-400 B.C.)
On demand. Ancient Greek society and culture from dark ages through golden age of 5th century. Resourcefulness of Hellenism in democratic politics, imperialistic policies and classic products of Periclean Athens. Weakness of Greek civilization in coping with crises engendered by Atheno-Peloponnesian war.

HIST 4420(3)
Roman Revolution: From Gracchi Through Caesar Augustus
On demand. Crisis of social turbulence, political violence and cultural ambivalence that marked Rome's transition from city-state to world state; how and why Roman archaism, republicanism and imperialism contributed to collapse of Late Republic and creation of Early Empire.

HIST 4440(3)
The Making of Europe
On demand. Cultural, religious, political and economic aspects of the Middle Ages which established the framework for modern European civilization; cross-cultural contacts with the Christian and Islamic East.

HIST 4460(3)
Early Modern Europe 1450-1750
On demand. Comparative study of European societies in an age of transition. Renaissance, Reformation, growth of absolutism and constitutionalism, economic expansion, social change, intellectual development and emergence of baroque art forms.

HIST 4540(3)
European Foreign Relations, 1914-Present
On demand. Foreign policies and diplomatic practices of the great powers and their leaders: World War I,
postwar quest for stability; World War II; Europe in the Cold War; contemporary problems.

HIST 4550(3)
Europe Since 1945
Fall. Europe since World War II. International events (division of Europe, Cold War, fall of Communism), domestic developments (evolution of modern welfare state) and impact of nationalism and internationalism. Prerequisite: HIST 1520 or HIST 3770.

HIST 4560(3)
The Holocaust and Anti-Semitism
On Demand. Anti-Semitism as a historical phenomenon, with emphasis on German National Socialism. Causes and consequences of the Holocaust; effects on European Jewry; post-war Nazi and racist movements in Germany.

HIST 4580(3)
England, 55 B.C.-1689
Fall. Major constitutional, economic, political, religious and social developments through the 17th century: making of the Anglo-Saxon kingdom, feudal government and society, crisis of late medieval England, Tudor restoration of order, 17th-century civil war and revolution.

HIST 4590(3)
Great Britain, 1689-Present
Spring. Growth of parliamentary government; impact of the Enlightenment, French Revolution and industrialization; Victorian England; political and economic reform; two world wars and their consequences.

HIST 4690(3)
Imperial Russia
On demand. Development of Russian social, political and economic systems from the time of Peter the Great to the Revolution of 1917. Provides understanding of pattern of historical development with a grasp of basic resources necessary to continued study of Russian society.

HIST 4700(3)
20th Century Russia
On demand. Development of Russian social, political and economic systems after the Revolution of 1917. Provides understanding of pattern of historical development with a grasp of basic resources necessary to continued study of Russian society. Applicable to the BG Perspective (general education) social sciences and international perspective requirements.

HIST 4710(3)
Russian Political Economy
On demand. Russian political and economic systems, their structure and functioning from beginning of modernization to present. Provides understanding of pattern of historical development with a grasp of basic resources necessary to continued analysis of contemporary Russian political economy.

HIST 4780(3)
The Atlantic World, 1500-1800
On Demand. Examination of the Atlantic World community from first contacts through the age of revolutions, changes that presaged globalism. Topics include the development of the plantation system and the rise of slavery; the African Diaspora; the interaction of European, Amerindian, and African peoples and cultures; the environmental impact of the transatlantic exchange; the Atlantic revolutions; the integration of the Atlantic economy; and the ramifications of and resistance to the Atlantic system at the end of the eighteenth century.

HIST 4800(3)
Research Seminar
Fall, Spring. Designed to develop and apply historical research skills through exploration of topics selected by the instructor. Required for and open only to History and Integrated Social Studies majors who have attained junior status.

HIST 4890(1 - 3)
Internship
Fall, Spring, Summer. Supervised field experience in an applied history setting. Prerequisite: junior/senior standing and permission of undergraduate adviser. Credit not applicable to history major or minor. May be repeated to maximum of six hours. Graded S/U.

HIST 4950(1 - 3)
Workshop on Current Topics
On demand. Intensive educational experience on selected topics. Typically an all-day or similar concentrated time format used. Requirements usually completed within time format. May be repeated if topics differ on approval of adviser.

HIST 4960(1 - 3)
Readings in History
Fall, Spring, Summer. Individual readings in consultation with instructor in fields of special historical interest. Prerequisites: consent of department chair and instructor. May be repeated.

Subject: Health Information Technology
HIT 1000(3)
Introduction to Health Information Systems
Survey of health care delivery systems and their levels of organization. Basic policies and procedures as they relate to technical information management standards as required by accreditation or licensing agencies. Three hours lecture, 24 hours clinical instruction.

HIT 1040(3)
Medicolegal Aspects of Health Information
The management of medical records and other health information as legal documents, confidential communications, consents and authorizations for release of information. Current legal issues and problems.

HIT 1120(3)
Coding and Classification Systems ICD-9-CM
Coding, classifying and reimbursement systems utilizing ICD-9-CM. Skill in utilizing computerized encoding
systems and application of reimbursement systems. Three hours lecture, 16 hours of clinical instruction per semester. Prerequisites: AHTH 1310 or equivalent, AHTH 1100 or MEDT 3010, or permission of instructor.

**HIT 1600(1 - 3)**
**Comparative Health Records**
Review of current record format in the non-acute setting, including accreditation guidelines and standards for content. Prerequisite: HIT 1000 and HIT 1120 or HIT 2030, or junior standing in an allied health program with permission of instructor.

**HIT 2000(3)**
**Information Systems for HIT**
Components of information technology as it relates to health care professions including hardware, software, networking, connectivity and telecommunications as well as using computers for expert systems and obtaining health information online. Advanced system applications and future directions for computers in health care. Prerequisites: HIT 1000 and MIS 2000 or MIS 2000 and permission of instructor.

**HIT 2010(2)**
**Laboratory Simulation**
Application of health information management theory to professional practice in a supervised learning experience in an off-campus laboratory practical. Six laboratory hours per week. Prerequisites: HIT 1000, HIT 1040, and HIT 1120. Corequisite: HIT 2110. Graded S/U.

**HIT 2030(2)**
**Coding and Classification Systems: HCPCS and CPT**
Coding, classification, and reimbursement systems utilizing HCPCS and CPT. Skill in utilizing computerized encoding systems. Current topics related to reimbursement schemes. Prerequisites: AHTH 1110, AHTH 1100 or MEDT 3010, or permission of instructor.

**HIT 2050(2)**
**Reimbursement Methodologies**
Use of coded data and health information in reimbursement and payment systems appropriate to all health care settings and managed care. Prerequisites: HIT 1000 and HIT 1120 or HIT 2030; or junior status in allied health care major.

**HIT 2100(1)**
**Organization and Supervision of Health Information**
Principles of organization and supervision in order to develop effective skills in leadership, motivation and team building techniques in the multidisciplinary health care industry. Emphasis on organizational skills applicable to the health information field. Prerequisite: HIT 1000 and HIT 2110 or junior standing in health care major with permission of instructor.

**HIT 2110(3)**
**Health Care Statistics and Data Literacy**
Health and hospital data collection, analysis and presentation. Emphasis on effective use, collection, arrangement, presentation and verification of health care data. Three hours lecture. Prerequisite: HIT 1000 or junior status in allied health care major.

**HIT 2130(2)**
**Advanced Coding**
Coding, classifying and reimbursement systems utilizing ICD-9-CM and CPT-4. One hour lecture, two hours assigned lab. Prerequisites: HIT 1120 and HIT 2030.

**HIT 2150(1)**
**Clinical Assessment and Performance Improvement**
Principles of quality assessment process and provision of a framework for joining skills in collecting and analyzing data in health care. One hour lecture, eight hours clinical instruction per semester and laboratory arrange. Prerequisites: HIT 2110 and BAT 2090, or junior standing in an allied health major with permission of instructor.

**HIT 2200(3)**
**Directed Practice**
Application of health information management theory to professional practice under supervision by a clinical supervisor at an external agency. One hour lecture per week and 160 directed practice hours per semester. Prerequisite: HIT 2110. Graded S/U.

**HIT 2900(1 - 3)**
**Topics Medical Record Technology**
Medical record technology projects, workshops and seminars dealing with current topics not covered in existing courses. May be repeated up to six credits if topics vary. Prerequisite: permission of instructor.

**HIT 2910(1 - 3)**
**Field Experience**
Paid field work in a health information department under supervision of a Registered Record Administrator of Accredited Record Technician, or other qualified health information manager with the consultation of the program director. Prerequisite: permission of instructor.

**Subject: Honors**

**HNRS 2010(4)**
**Introduction to Critical Thinking**
Fall. Interdisciplinary inquiry in social sciences. Analysis of arguments through assumptions, ambiguity, data and fallacies; formulation of conclusions and alternative inferences; value assumptions and decision making. Prerequisite: admission to the honors program or permission of honors director. Applicable to the BG Perspective (general education) social sciences requirement.

**HNRS 2020(3)**
**Application of Critical Thinking in Disciplines**
Students will be presented with the different modes of critical thinking appropriate to different disciplines and will apply this critical thinking to connect the discipline to human values. Major intellectual fields will be covered. Prerequisite: HNRS 2010.
HNRS 2400 (3 - 5)  
Honors Seminar: Social Sciences  
Interdisciplinary social sciences seminar that integrates at least two different social sciences. Content and skills relate to both specific disciplines and social sciences in general. Satisfies Arts and Sciences group requirement. Prerequisite: admission to the honors program or permission of honors director. May be repeated up to 8 hours. Applicable to the BG Perspective (general education) social sciences requirement.

HNRS 2500 (3 - 5)  
Honors Seminar: Natural Sciences  
Interdisciplinary natural science seminar, integrating at least two different natural sciences. Content and skills relate to both specific disciplines and natural sciences in general. Satisfies Arts and Sciences group requirement. Prerequisite: admission to the honors program or permission of the honors director. Applicable to the BG Perspective (general education) natural sciences requirement.

HNRS 2600 (3 - 5)  
Interdisciplinary Humanities Seminar  
Integrates at least two different humanities. Content and skills relate to both specific disciplines and humanities in general. Satisfies Arts and Sciences group requirement. Prerequisite: admission to the honors program or permission of the honors director. May be repeated up to 6 hours. Applicable to the BG Perspective (general education) humanities and arts requirement.

HNRS 3000 (1 - 3)  
Special Topics Seminar  
Subject matter varies. Special seminars are elective courses designed to meet the interest and curiosity of honors students. Prerequisite: approval of honors director. May be repeated up to six hours if topics differ.

HNRS 4000 (1 - 3)  
Special Topics Seminar  
Subject matter varies. Special seminars are elective courses designed to meet the interest and curiosity of honors students. Prerequisite: approval of honors director. May be repeated up to six hours if topics differ.

HNRS 4900 (1 - 5)  
Independent Study in Honors  
For students who wish to pursue intensive study in honors independently or in conjunction with courses regularly offered. May be repeated. Prerequisite: consent of instructor and director of honors program.

HNRS 4980 (1)  
Honors Project Development  
Fall, Spring, Summer. Students will work with a single faculty member to more fully develop their initial ideas of an Honors Project. The outcomes of the course will be a thorough understanding of the background in their chosen field, a developed bibliography and an Honor Project proposal. Prerequisites: HNRS 2010, AS 2500H, 15 hours of Honors credit (including HNRS 2010 and AS 2500H) or permission of the Honors Director.

HNRS 4990 (2)  
Honors Project  
Fall, Spring, Summer. Student selects two faculty from different disciplines to advise work on a research or creative project that began with HNRS 498. It is the expectation that one of the faculty members served as their advisor for HNRS 498. Prerequisites: HNRS 4980 and permission of the Honors Director.

Subject: Health Promotion  
HP 2150 (3)  
Health & Wellness  
Fall and Summer. Heredity, environment, and lifestyle behaviors will be examined for their influence on health. Topics include behavior change theory, fitness, stress management, nutrition, weight management, alcohol and other drugs, and sexual health.

HP 2160 (3)  
Introduction to Community and Worksite Health Promotion  
Fall, Spring. An overview of health education theories, practice and planning models. Basic understanding of the determinants of health and behavior throughout the lifespan. Introduction to health promotion practices addressing the needs of individuals, families, and communities.

HP 3080 (3)  
Health Communication Strategies  
Spring, and Summer on Demand. Instructional techniques, public speaking, materials development, digital technology, interactive learning activities, literature search strategies, software packages, and basic newsletter and website development.

HP 3100 (3)  
Program Planning and Evaluation  
Fall. Theories, principles and methods involved in the planning and evaluation of health programs at the worksite and in the community. Prerequisites: HP 2150 and HP 3080 or permission of instructor.

HP 3110 (3)  
Health Promotion and the Health Care System  
Fall on odd-numbered years. Introduction to the health care and health insurance systems, including demand management and managed care, as they relate to health promotion planning, implementation and evaluation.

HP 3380 (3)  
Concepts of Human Sexuality  
Fall, Spring, and Summer on demand. Health, biological, social, and psychological aspects of human sexuality. Prerequisite: junior standing or consent of instructor.

HP 3400 (3)  
Drug Use and Abuse  
Health, physical, psychological, and social ramifications of drug use and abuse. Policies and practices used to address the problems of drug abuse. Prerequisite: junior standing or consent of instructor.
HP 3890(1 - 6)
Practicum in Health Promotion
Fall, Spring, Summer. Limited field experience consisting of observation and participation in health promotion activities. May be repeated for up to a total of 6 credit hours; 40 hours of fieldwork required per credit hour. Prerequisites: HP 3080, HP 3100, current CPR and First Aid certifications. Application deadlines: 11/1 for Spring; 4/1 for Summer and Fall.

HP 3950(1 - 3)
Workshop on Current Topics
Intensive educational experience on selected topics related to skills development, content update or materials developed. Typically, an all-day or similar concentrated time format. Requirements usually completed within time format. May be repeated on approval of adviser. Prerequisite: as decided by instructor.

HP 4100(3)
Ergonomics
Fall on even-numbered years. Overview of ergonomics and its application in preventing cumulative trauma disorders. Students will learn how to analyze work space, workflow, task design, and individual work habits, and make recommendations on how to more effectively adapt the job to the individual. Prerequisite: HP 2150 or consent of the instructor.

HP 4110(3)
Organization and Administration of Health Promotion Programs
Spring. Basic concepts for management of health and social programs in community and workplace settings. Topics include ethical/legal concerns, fiscal and personnel policies, marketing, public relations, and strategic planning. Prerequisites: HP 3100 or permission of instructor.

HP 4120(3)
Health Behavior Instructor
Students will obtain the knowledge, skills, and strategies for implementing and instructing behavior change programs in weight management, stress management, and smoking cessation. Prerequisite: HP 2150 or permission of instructor.

HP 4700(1 - 3)
Independent Study in Health Promotion
An in-depth study project of a topic of particular significance to the student. Project must be approved by project supervisor and program area chair prior to registration. May be repeated.

HP 4890(10 - 15)
Internship in Health Promotion
Fall, Spring, Summer. Pre-professional field experience at an approved site; 40 hours of fieldwork required per credit hour. Prerequisites: Minimum GPA of 2.5 overall or > 2.75 in core courses, completion of HP 3100 and HP 4110 with a "C" or better, and approval of academic adviser. Application deadlines: 11/15 for Spring; 4/1 for Summer and Fall.

Subject: Humanities
HUM 1010(3)
Introduction to the Humanities
Experience of art including music, film, theatre, literature, dance, painting, sculpture, architecture, philosophy and the combined arts. Applicable to the BG Perspective (general education) humanities and arts requirement.

HUM 2000(3)
Topics in Humanities
Basic humanities concepts organized on a single topic; self and culture, the combined arts, art and nature, mythology and symbolism, comic and tragic in art, language and culture. Can be repeated once if topics differ. Prerequisite: HUM 1010 or consent of instructor.

Subject: Interior Design
ID 1160(3)
Introduction to Interior Design
Spring. Overview of the interior design profession; examination of the design process with emphasis on creative problem solving and development of competencies in space planning and presentations.

ID 1170(3)
Interior Design I
Fall, Spring. Color drawing techniques used in the simulation of materials in interior and exterior renderings. Experiments with various media, their uses and limitations as applicable to visual presentations by designers, architects, renderers, and illustrators. Two one-hour lectures, one two-hour studio. Interior Design majors only. Prerequisite: ARCH 1050. Extra fee.

ID 2190(3)
Interior Design II
Fall, Spring. Programming, conceptualization and problem solving for residential and non-residential environments. Historic preservation and special population projects also included. Prerequisites: ID 1160, ID 1170. Six studio hours. Extra fee.

ID 3030(3)
Contemporary Interiors
Fall, Spring. Design elements, principles and color theory used to create the human environment. Finish and material selection for furnishings and other surface treatments. Interior Design majors only. Prerequisite: ID 1160. Extra fee.

ID 3190(3)
Interior Design III
Fall. Small residential design with emphasis on space planning, furniture selection and layout in children and special populations projects. Prerequisites: ID 2190 and ID 3030. Extra fee.

ID 3290(3)
Interior Design IV
Spring. Large residential projects incorporating kitchen and bath detailing and visual presentation. Complete design concept and presentation with special attention to low income, energy conservation and specialized construction details. Prerequisite: ID 3190. Six studio hours. Extra fee.

ID 3330(2)
Specifications, Codes, and Special Needs
Spring. Specification writing for interior finishes and furniture. Accessing local code information, fire safety and organizations that test product safety. Prerequisite: ID 3190.

ID 3450(3)
Computers and Interior Design
Fall, Spring. Microcomputer applications for the professional practice of interior design; includes computer aided design, spread sheets, specifications and estimations. Prerequisites: CS 1000 and ID 2190. Extra fee.

ID 3650(3)
Lighting Design for Interior Environments
Fall. Theoretical foundations, practical implications, techniques, and products for appropriate lighting design of residential and commercial interior environments. Prerequisites: ID 2190, ARCH 2360, and ID 3030. Graded A/F.

ID 4060(3)
Housing the Family
Spring. Selecting, financing and adapting housing for families with varying lifestyles and needs. Energy efficiency and green/sustainability in housing, government role in housing, renting and owning options, and psychological needs emphasized.

ID 4170(3)
Interior Design V
Fall. Small non-residential design which incorporates programming, conceptualization, problem solving and evaluation for offices, retail and other small institutions. Prerequisites: ID 3290. Extra fee.

ID 4180(3)
History of Interiors
Fall. European and American furniture from 14th through 20th centuries with corresponding interiors; wall, window and floor treatments and decorative arts. Prerequisite: ID 3030 or consent of instructor.

ID 4190(3)
Interior Design VI
Spring. Large nonresidential design incorporating building systems, custom cabinetry and open office systems in historic preservation and reuse projects. Prerequisites: ID 3330, ID 4170, and COOP 50. Six studio hours. Extra fee.

ID 4230(2)
Professional Practice in Interior Design
Fall. Ethics and business procedures for interior designers. Estimating, scheduling, budgeting and contract writing for installation of project. Preparation of resumes and portfolios for the profession. Prerequisites: ID 3190, ID 3290.

Subject: International Studies

INST 2000(3)
Introduction to International Studies
Fall, Spring, Summer. This introduction to the International Studies major provides an interdisciplinary overview of the processes and effects of globalization. Major themes include population and migration (demographics), the role of women, environmental change, economic and political issues. Applicable to the BG Perspective (general education) social sciences and international perspective requirements.

INST 2100(3)
Interpersonal Communication in International Contexts
Fall, Spring. In this course, students examine the ways in which humans create, exchange, and interpret meaning as a function of their national cultures. Readings and applied assignments stress intercultural sensitivity, empathy, and cross-cultural communication competence. Credit allowed for only one of IPC 2100 and INST 2100. Prerequisite: sophomore standing.

INST 3800(3)
Topics in International Studies
Fall, Spring, Summer. In-depth exploration of issues surrounding globalization as related to an aspect of culture, politics, history, communications, environmental and area studies. May be repeated if topics differ. Repeatable up to six credit hours. Prerequisite: INST 2000 or permission of instructor.

INST 4000(3)
Seminar in International Studies
Spring or Fall. Capstone seminar which provides students with an intensive study of one or more major topics in international studies. Using approaches to inquiry in the field, students prepare a research project and formal presentation of their work related to their major focus in International Studies. Prerequisite: IS major or minor and junior status.

INST 4890(1 - 12)
Internship
Applied experience for majors. Specific proposal and permission of program adviser required prior to enrollment. Guidelines available from advisor. Graded S/U.

Subject: Interpersonal Communication

IPC 1020(3)
Introduction to Communication
Fall, Spring, Summer. Basic principles of interpersonal communication, small-group communication and public speaking; exercises and activities in each area with attention to individual needs.

IPC 1950(1)
Intercollegiate Forensic Activities
Fall, Spring. Instruction and experience in intercollegiate contest speaking, including forms of public address and oral interpretation. May be repeated for four credits. Extra fee.

IPC 2010(3)
Communication Theory
Fall, Spring, Summer. Development of theoretical formulations in speech communication. Emphasis on special heuristic (not general explanatory) theories which focus on relationship factors, as well as speaker and message aspects. Interdisciplinary perspectives utilized. Prerequisite: IPC 1020.

IPC 2030(3)
Small Group Communication
Fall, Spring, Summer. Theory and practice in the analysis of social interaction in small groups as it affects problem solving and policy formation processes. Prerequisite: IPC 1020.

IPC 2050(3)
Presentational Speaking in Organizations
Fall, Spring. Principles of public communication, composition and public speaking, including practice. Prerequisite: IPC 1020.

IPC 2070(3)
Interpersonal Communication I
Fall, Spring, Summer. Introduction to dyadic communication with a focus on factors which influence effectiveness. Practical experience in behaviors associated with interpersonal competence. No credit for both IPC 2070 and IPC 3060. Prerequisite: IPC 1020.

IPC 2090(3)
Interpersonal Communication and Interviewing
Fall, Spring. Introduction to interviewing as interpersonal communication. Theory, research and practice in the selection interview, performance-appraisal interview, information-gathering interview, survey interview, problem-solving interview and persuasive interview. Prerequisite: IPC 1020.

IPC 2100(3)
Interpersonal Communication in International Contexts
Fall, Spring. In this course, students examine the ways in which humans create, exchange, and interpret meaning as a function of their national cultures. Readings and applied assignments stress intercultural sensitivity, empathy, and cross-cultural communication competence. Credit allowed for only one of IPC 2100 and INST 2100. Prerequisite: IPC 1020 and IPC 2010, or student must either be an International Studies major/minor or enrolled in the Global Village.

IPC 3000(3)
Communication Research Methods
This course introduces students to communication research methods. Students will learn to read and design communication research in social scientific, humanistic, and critical traditions. Prerequisites: IPC 1020 and IPC 2010.

IPC 3030(3)
Persuasive Communication
Fall, Spring, Summer. Theories and concepts of persuasive communication; attitude change, audience analysis and strategies of persuasion. Prerequisites: IPC 1020, IPC 2010, and IPC 3000.

IPC 3040(3)
Leadership in Communication
Fall. Conceptions, methods and techniques of leadership related to communication. Emphasis on understanding and application of communication theories to leadership. Prerequisites: IPC 1020, IPC 2010, and IPC 3000.

IPC 3060(3)
Interpersonal Communication
Fall, Spring, Summer. Two-party communication, reduction of defensive climates as a means of facilitating effective communication. Practical experience in information seeking, persuasive and personal encounters. For nonmajors only. No credit for both IPC 2070 and IPC 3060.

IPC 3070(3)
Organisational Communication
Fall, Spring. Message initiation, diffusion and reception in organizational setting. Role of communication in establishing and maintaining climates, systems, cultures; organization's external environment. Prerequisites: IPC 1020, IPC 2010, and IPC 3000.

IPC 3080(3)
Argumentation
Fall, Spring, Summer. Principles of argumentation; case analysis and construction; practice in forms of debating using contemporary topics. Prerequisites: IPC 1020, IPC 2010, and IPC 3000.

IPC 3100(3)
Rhetorical Communication
Fall. Theories and methods of criticism of rhetorical communication. The critical lens focuses on the important communicator and messages directed at intended audiences capable of modifying a significant rhetorical situation. Prerequisites: IPC 1020, IPC 2010, and IPC 3000.

IPC 3110(3)
Virtual Teams
This course addresses issues relating to virtual teams such as theories about collaboration, communication, and organization in the era of globalization, and communication technologies that enable communication and collaboration among individuals and their effects on the individual team members and their organizations. Prerequisites: IPC 1020, IPC 2010, and IPC 3000, or permission from instructor.

IPC 3950(1 - 3)
Workshop on Current Topics
On demand. Intensive educational experience on selected topics. Typically, an all-day or similar concentrated time format. May be repeated on approval of adviser, if topics differ. Prerequisites: IPC 1020 and IPC 2010.
IPC 3990(1)
Intercollegiate Forensic Activities
Fall, Spring. For juniors and seniors; similar to IPC 1990. May be repeated for four credits. Extra fee.

IPC 4020(3)
Political Communication
Fall. Rhetorical theories and practices are central in this study of political campaign communication. Emphasis is placed on contemporary presidential campaigns and mediated messages. Prerequisites: IPC 1020, IPC 2010, and IPC 3000.

IPC 4040(3)
Communication and Conflict
Fall, Spring. Communication skills in conflict situations in dyadic, group, and organizational settings; negotiation, mediation, and arbitration processes. Prerequisites: IPC 1020, IPC 2010, and IPC 3000.

IPC 4050(3)
Computers Mediating Cultures and Organizations
This course explores how meaning-making processes and social formations shape communication and cultures within computer-based technological environments in a variety of contexts. We critically examine theory and practice of producing online multimediated spaces. Prerequisites: IPC 1020, IPC 2010, and IPC 3000.

IPC 4060(3)
Topics in Communication Studies
Fall, Spring, Summer. Selected topics or subject areas within the field of communication, marital communication, legal speaking, assertiveness and nonverbal communication. May be repeated to six hours.

IPC 4070(3)
Interpersonal Communication II
Fall, Spring, Summer. Extended analysis of current theoretical positions and research in interpersonal communication. Topics include social exchange, rules, attribution, attraction, relational stages, power, impression formation and management. Prerequisites: IPC 1020, IPC 2010, IPC 3000, and IPC 2070 or IPC 3060.

IPC 4080(3)
Intercultural Communication
Fall. Communication variables in intercultural contexts. Culture and meaning, communication values in intercultural dialogue, culture as symbolic worldview, culture shock, conflict resolution across cultures. Prerequisites: IPC 1020, IPC 2010, and IPC 3000.

IPC 4090(3)
International Communication
Fall, Spring. Relationships between communication and national cultures. Background theory and research in international communication encourages an appreciation of communication similarities and differences across nations. Applied development of international and global communication competence. Prerequisites: IPC 1020, IPC 2010, and IPC 3000, or consent of instructor.

IPC 4110(3)
Performing Digitally Mediated Identities and Communication
This course examines how digital media shape and structure interpersonal and intercultural communication. Drawing on theories of interpersonal communication, culture, race and gender, this course exposes students to a variety of digitally mediated socio-cultural spaces and engages them in an indepth critique and understanding of such communication contexts. Prerequisites: IPC 1020, IPC 2010, and IPC 3000.

IPC 4120(3)
Communication and Gender
Fall, Spring. Theories and principles of communication, gender, and power issues in multiple contexts (interpersonal relationships among friends, family, and romantic partners, within organizations, media and advertising, and the academy). Prerequisites: IPC 1020, IPC 2010, and IPC 3000.

IPC 4180(3)
Communication Ethics
This course addresses issues relating to communication ethics such as theoretical perspectives on communication ethics, codes of ethics for professions, and communication ethics in different contexts. Prerequisites: IPC 1020, IPC 2010, and IPC 3000.

IPC 4200(3)
Communication, Race, and Power
In this course, we will work together to investigate underlying racial politics in a number of contexts, seeking an understanding of those power structures that are often buried beneath our normalized communication practices. Our work will examine how race is constructed through our communication. Prerequisites: IPC 1020, IPC 2010, and IPC 3000.

IPC 4220(3)
Technology for World Communication
Examines the social, cultural, and political impact of information and communication technology around the world. Analyzes current styles and discourses of communication through technology, and explores interpersonal, ethical, socio-cultural implications of these developments. Emphasizes collaboration: students, individually and in small groups, will explore and critique current international and multicultural issues including gender, national identity, ownership, class, and privacy. Encourages "hands-on" approach to researching technology and thinking critically about its global impact. Prerequisites: IPC 1020, IPC 2010, and IPC 3000.

IPC 4300(3)
Rhetoric of Social Movements
This course introduces students to theories and practices of how groups organize to create social change. Course material will address movements including, but not limited to, civil rights, feminism, environmentalism, religion, and new social movements. Prerequisites: IPC 1020, IPC 2010, and IPC 3000.

IPC 4440(3)
Health Communication
Fall, Spring. Theory, research, and principles of communication in health industries, public policy, and
individual health; emphasis on U.S. health with attention to cultural and gender issues. Applicable for students interested in becoming care givers, health administrators, researchers in health, or are interested in their own health. Prerequisites: IPC 1020, IPC 2010, and IPC 3000, or permission from the instructor.

IPC 4890 (1-10)
Communication Internship
Fall, Spring, Summer. Field experience in communication. Study of communication as intern in public or commercial agency. Open only to IPC majors in BAC program. Prerequisites: IPC 1020 and IPC 2010, 2.5 overall GPA, junior status and 12 hours of completed IPC courses. May be repeated up to 10 hours. Graded S/U.

IPC 4900 (1-3)
Problem in Communication Studies
Fall, Spring. For advanced student who wishes to do intensive study in rhetoric, public address or communication studies independently or in conjunction with courses regularly offered. May be repeated. Prerequisites: IPC 1020, IPC 2010, IPC 3000 and consent of department.

IPC 4910 (1-3)
Readings in Interpersonal Communication
Fall, Spring, Summer. Supervised readings on topics of current or specialized interest in interpersonal communication. Prerequisites: IPC 1020, IPC 2010, IPC 3000, junior standing, and consent of instructor and department chair. Graded S/U. Not repeatable.

Subject: Italian
ITAL 1010 (4)
Elementary Italian I
Fall. Cultural approach to beginning language. Development of the four skills: listening, speaking, reading, writing. Four class periods and laboratory practice each week. Applicable to the BG Perspective (general education) humanities and arts and international perspective requirements.

ITAL 1020 (4)
Elementary Italian II
Spring. ITAL 1010 continued. Four class periods and laboratory practice each week. Prerequisite: ITAL 1010 or one year of Italian in high school. Applicable to the BG Perspective (general education) humanities and arts and international perspective requirements.

ITAL 1030 (4)
Intensive Elementary Italian
Spring. Intensive course emphasizes grammatical structure of language and oral practice. Recommended for graduate students and students with prior language experience.

ITAL 2010 (3)
Intermediate Italian I
Fall. Grammar review. Development of the four language skills. Three classes and laboratory practice each week. Prerequisite: ITAL 1020, two years of Italian in high school, or B or better in ITAL 1030 and consent of instructor. Applicable to the BG Perspective (general education) humanities and arts and international perspective requirements.

ITAL 2020 (3)
Intermediate Italian II
Spring. ITAL 2010 continued. Three class periods and laboratory practice each week. Prerequisite: ITAL 2010 or three years of Italian in high school. Applicable to the BG Perspective (general education) humanities and arts and international perspective requirements.

ITAL 2030 (3)
Italian Language Practicum (Italy)
Italian language instruction at BGSU affiliated language institutes in Italy. May be repeated for 6 hours of credit. Prerequisite: ITAL 2020.

ITAL 2600 (3)
Italian Literature in Translation
On demand. Readings in English of Italian authors. May include Dante, Petrarch, Boccaccio, Machiavelli, Galileo.

ITAL 2610 (3)
The Italian Cinema
Modern Italian culture and literature movements and their expression in cinema; demonstrates close relationship between literature and cinema. In English. Offered in fall of odd-numbered years. Extra fee.

ITAL 3030 (3)
Italian Language Practicum (Italy)
Italian language instruction at BGSU affiliated language institutes in Italy. May be repeated for 6 hours of credit. Prerequisite: ITAL 2030.

ITAL 3610 (3)
Introduction to Italian Literature
Chronological evaluation of outstanding works in Italian literature from Middle Ages to present; various movements and genres. Prerequisite: ITAL 2020.

ITAL 3710 (3)
Italian Civilization I
Political, social, intellectual, artistic life from Middle Ages through 19th century. Background for literary studies and preparation for teaching of Italian. Prerequisite: ITAL 2020.

ITAL 3720 (3)
Italian Civilization II
ITAL 3710 continued; political, social, intellectual, artistic life of modern Italy. Prerequisite: ITAL 2020.

ITAL 4700 (1-3)
Independent Readings in Italian
For the advanced student who wishes to study a particular author or period, or a problem in language or civilization. Prerequisites: consent of chair of department and instructor. May be repeated.

ITAL 4880(3)
Italian Literature: Advanced Studies
Study of author, literary school, genre or selected theme. May be repeated to nine hours if topics are clearly different. Prerequisite: ITAL 3610.

Subject: Japanese
JAPN 1010(4)
Elementary Language and Culture I
Fall. Introduction to modern spoken Japanese. Four class periods and scheduled oral practice each week. Applicable to the BG Perspective (general education) humanities and arts and international perspective requirements.

JAPN 1020(4)
Elementary Language and Culture II
Spring. JAPN 1010 continued. Four class periods and scheduled oral practice each week. Prerequisite: JAPN 1010 or one year of high school Japanese, or equivalent. Applicable to the BG Perspective (general education) humanities and arts and international perspective requirements.

JAPN 2000(2 - 6)
Study Abroad I
On demand. Intermediate in-country Japanese language and culture training. Repeatable up to six hours if topics vary. Prerequisite: JAPN 1020 or equivalent.

JAPN 2010(4)
Intermediate Japanese I
Fall. JAPN 1010-JAPN 1020 continued. Conversation, writing, reading, grammar. Three class periods and scheduled oral practice each week. Prerequisite: JAPN 1020 or two years of high school Japanese, or equivalent. Applicable to the BG Perspective (general education) humanities and arts and international perspective requirements.

JAPN 2020(4)
Intermediate Japanese II
Spring. JAPN 2010 continued. Three class periods and scheduled oral practice each week. Prerequisite: JAPN 2010 or three years of high school Japanese, or equivalent. Applicable to the BG Perspective (general education) humanities and arts and international perspective requirements.

JAPN 2150(3)
Japanese Culture
Japanese culture, its evolution, and manifestations in the arts, social life, folkways, religious beliefs, and other areas of life. Presentations, readings, and writing in English. Applicable to the BG Perspective (general education) humanities and arts requirement.

JAPN 2160(3)
Contemporary Japanese Society
Contemporary life in Japan and crosscultural study of Japanese values. Examination of the culture as evidenced in societal institutions and the arts. Presentations, readings, discussions, and writing in English.

JAPN 3000(2 - 6)
Study Abroad II
On demand. Advanced in-country Japanese language and culture training. Repeatable up to six hours if topics vary. Prerequisite: JAPN 2020 or equivalent.

JAPN 3010(3)
Third Year Japanese I
JAPN 2010-JAPN 2020 continued. Development of the four skills. Three class periods and scheduled oral practice each week. Prerequisite: JAPN 2020 or equivalent.

JAPN 3020(3)
Third Year Japanese II
Spring. JAPN 3010 continued. Three class periods and scheduled oral practice each week. Prerequisite: JAPN 3010 or equivalent.

JAPN 3120(3)
Introduction to Japanese Literature
Works of select Japanese writers in translation representative of key literary traditions, themes, and styles. Class discussion, readings, and writing in English. Applicable to the Arts and Humanities literature requirement.

JAPN 4150(3)
Japanese Film
Cultural and cinematic aspects of Japanese film; emphasis may be on important developments in Japanese filmmaking, thematic aspects of film, or on interrelationships between cinematic and other cultural phenomena. Two class meetings and required film screening.

JAPN 4800(1 - 3)
Selected Topics in Japanese
Topics chosen from Japanese literature, culture or thought to meet curriculum needs and student requests. May be repeated to six hours with different topics.

JAPN 4910(1 - 3)
Studies in Japanese
Independent reading for the advanced student. Prerequisites: arrangement with instructor and consent of department chair prior to registration. May be repeated.

Subject: Journalism
JOUR 1000(3)
Introduction to Mass Communication
Fall, Spring, Summer. Modern journalism and mass communication; mass communication media and effects; role and influence of journalistic media such as newspapers, magazines, broadcast media, photojournalism, computers and related fields of advertising and public relations. Open to nonmajors. Credit not given for both JOUR 1000 and TCOM 1030.

JOUR 2000(3)
Introduction to Journalistic Writing
Fall, Spring, Summer. Introduction to newspaper, broadcast and public relations writing; emphasis on grammar, spelling, punctuation and sentence structure. Prerequisites include: at least 30 credit hours; GSW 1120; JOUR 1000 with at least a C; and an overall grade point average of 2.7. Credit not allowed for both JOUR 2000 and JOUR 2010. Extra fee.

JOUR 2010(3)
Journalism Techniques for Nonmajors
Fall, Spring, Summer. Introduction to news gathering, news writing, news editing and journalistic graphics for nonjournalism majors whose programs might benefit from such a course. Credit not applicable toward major or minor in journalism. Credit not allowed for both JOUR 2000 and JOUR 2010. Prerequisite: GSW 1120. Extra fee.

JOUR 2500(3)
Reporting
Fall, Spring, Summer. News gathering and news writing for all types of news stories ranging from the simple, factual story to the complex, specialized story. Practice in covering assignments for publication. Prerequisite: JOUR 2000. Extra fee.

JOUR 2900(1 - 3)
Specialized Journalism Basic Skills
Fall, Spring, Summer. Topics vary based on student and faculty interest and developments in the profession. May be repeated up to six credits if topics differ. Prerequisites: JOUR 1000 or TCOM 1030.

JOUR 3100(3)
Introduction to Visual Journalism
Introduction to news reportage through visual media. Includes sections on basic photographic techniques, such as composition, exposure, camera handling, film development and scanning. Also includes caption writing, news judgement, journalism ethics, publication design, desktop publishing and computer manipulation of images. Prerequisites: JOUR 2000 and access to 35mm camera. Extra fee.

JOUR 3150(3)
Visual Editing
Fall, Spring. Techniques of processing and editing visual journalism texts. Emphasis on videojournalism, including videography, editing in both linear and non-linear forms, and outputting to tape, the Internet and other media. Techniques of using words and visual elements together. Prerequisite: JOUR 2000. Extra fee.

JOUR 3200(3)
Feature Writing
Fall, Spring. Developing story ideas, researching and writing newspaper and magazine feature articles; researching free-lance markets. Prerequisites: JOUR 2500; major or minor status; junior standing.

JOUR 3250(3)
Copy Editing
Fall, Spring. Theory and practice in editing local and wire news, headline writing, picture editing, evaluating news, layout and design, video display terminal operation. Prerequisites: JOUR 2500; major or minor status; junior standing. Extra fee.

JOUR 3300(3)
Broadcast News
Fall. Techniques of writing, reporting and editing news for broadcast; rewriting wire copy; introduction to ENG shooting and editing techniques; preparation and use of television graphics. Student must provide own audio and video cassettes. Prerequisites: JOUR 2500; JOUR 3150; major or minor status; junior standing. Extra fee.

JOUR 3400(3)
Principles of Public Relations
Fall, Spring. Public relations problems, policies, practices applied to business and nonprofit organizations; media methods of communicating, survey research, and attitude change. Open to majors or minors only.

JOUR 3410(3)
Principles of Public Relations for Nonmajors
Fall, Spring, Summer. Public relations problems, policies, practices applied to business and nonprofit organizations; media methods of communicating, survey research, and attitude change. Open to non-majors and non-minors only.

JOUR 3440(3)
Public Relations Writing
Fall. Planning and preparation for print and audio-visual public relations messages. Fundamentals of writing for publications including newsletters, house journals, pamphlets and brochures. Prerequisites: JOUR 2500 and JOUR 3400; major or minor status; junior standing.

JOUR 3450(3)
Media Publication and Design
Fall, Spring. Theory and practice of editing functions and techniques in producing specialized publications: magazines, newsletters, newspapers and brochures for business and nonprofit organizations. Electronic typesetting and computer graphics. Prerequisites: JOUR 2500; major or minor status; junior standing. Extra fee.

JOUR 3850(3)
Journalism in the Movies
Focus on issues of journalism and society as reflected in films. Issues include power structures such as
race, class, and gender; media ownership; journalism ethics; reporting techniques; and historical changes in journalism. Open to nonmajors.

JOUR 3900(1 - 3)
Intermediate Specialized Journalism Skills
Fall, Spring, Summer. Topics vary based on student and faculty interest and developments in the profession. May be repeated up to six credits if topics differ. Prerequisites: JOUR 2000.

JOUR 4000(1 - 3)
Field Experience
Fall, Spring, Summer. Journalism internship program required of all journalism majors and minors. Activity may be in more than one medium, full or part time, paid or voluntary. Prerequisites: JOUR 2000; major or minor status. Graded S/U. May be repeated to 3 hours.

JOUR 4100(3)
Advanced Visual Journalism
Refining and building upon visual journalism skills, including the ability to produce news photographs as well as edit, critique and analyze the work of others. Designing, editing and producing news publications. Assembling a portfolio. Prerequisites: JOUR 2500, JOUR 3100 and JOUR 3150; major or minor status; junior standing. Extra fee.

JOUR 4140(3)
Supervision of High School Publications
For prospective teachers of high school journalism or advisers of school newspapers or yearbooks. Problems of editorial supervision, business management and production. Open to nonmajors.

JOUR 4200(3)
Public Affairs Reporting
Spring. Field practice in covering governmental and community affairs with attention both to general and specialized areas. Prerequisites: JOUR 3200; JOUR 3250, and JOUR 4000; major or minor status; junior standing.

JOUR 4300(3)
Advanced Broadcast News
Spring. Writing, editing, producing and anchoring for broadcast. Emphasis on ENG shooting and editing, field reporting and studio production. Research on issues affecting broadcast journalists. Student must provide own videotape cassette. Prerequisites: JOUR 3300 and JOUR 4000; major or minor status; junior standing. Extra fee.

JOUR 4400(3)
Public Relations Campaigns
Spring. Application of public relations theories, tools and techniques to the public relations campaign. Research, planning and execution are practiced. Prerequisites: JOUR 3400, JOUR 3440, and JOUR 3450; at least one hour of JOUR 4000; major or minor status; senior standing.

JOUR 4500(3)
Journalism Law and Ethics
Fall, Spring, Summer. Legal concept of freedom of the press, constitutional guarantees, libel, privacy, copyright, broadcast regulation, contempt, obscenity, ethical problems, right to know. Open to nonmajors.

JOUR 4550(3)
Diversity Issues in the Media
Fall. Focus on the news media image of racial and ethnic minorities and the image of women and other underrepresented social groups. Exploration of the extent to which discrimination and prejudice function within news media industries in terms of employment opportunities and how news coverage perpetuates stereotypes of women, people of color and other underrepresented social groups. Open to nonmajors.

JOUR 4600(3)
Online Journalism
Reporting, writing and editing news for interactive media, particularly the Internet. Special emphasis on the unique attributes of interactive media and how these attributes affect content. Usability, web design and HTML authoring. Prerequisites: JOUR 2500; major or minor status; junior standing.

JOUR 4650(3)
American Journalism History
Fall. American journalism from colonial newspapers to the multimedia age, emphasizing recurrent themes and issues in the history of the mainstream and alternative press. Open to nonmajors.

JOUR 4750(3)
Perspectives on International Media
Spring. Social, economic and political factors, organization and control in the national news and informational systems of countries around the world. Open to nonmajors.

JOUR 4800(1 - 3)
Special Problems in Journalism
Fall. Spring, Summer. Research problems, practical projects, intensive readings or mini-courses to meet needs of student's special interests. May be repeated. Prerequisite: instructor's consent.

JOUR 4850(3)
Media and Society
Spring. Media as institution, its role, content, effects and responsibilities as a cultural force in society. Topics vary. Open to nonmajors.

JOUR 4900(1 - 3)
Specialized Journalism Skills
Fall, Spring, Summer. Topics vary based on student and faculty interest and developments in the profession. May be repeated.

JOUR 4950(1 - 3)
Specialized Journalism Issues
Fall, Spring, Summer. Topics vary based on student and faculty interest and developments in the profession. May be repeated. Approved for Distance Ed.

Subject: Kinesiology

KNS 1160(2)
Soccer
Fall, Spring.

KNS 1210(1)
Tennis
Development and analysis of tennis skills. Understanding of mechanical principles, selective attention-decision making, net game strategies, and rules and equipment. One two-hour laboratory.

KNS 1230(2)
Track and Field
Fall.

KNS 1240(2)
Volleyball
Fall, Spring.

KNS 1370(1)
Educational Dance
Fall. An introduction to the Movement Approach as a participant in educational dance. One two-hour laboratory.

KNS 1380(1)
Educational Gymnastics
Fall. An introduction to the Movement Approach as a participant in educational gymnastics. One two-hour laboratory.

KNS 2020(1)
Badminton
Fall, Spring.

KNS 2030(1)
Basketball
Fall, Spring.

KNS 2040(1)
Archery and Bowling

KNS 2070(1)
Fencing
On demand. Skill and knowledge development basic to participation and understanding of fencing. One two-hour laboratory. Extra fee.

KNS 2090(1)
Golf
On demand. Skill and knowledge development basic to participation and understanding of golf. One two-hour laboratory. Extra fee.

KNS 2170(1)
Softball
Fall.

KNS 2180(1)
Swimming
Fall. Extra fee.

KNS 2240(1)
Outdoor Leisure Pursuits
Spring. Knowledge and skills of lifelong leisure activities such as camping, orienteering, hiking and aquatic-based experiences. One two-hour laboratory. Extra fee.

KNS 2270(3)
Introduction to Kinesiology
Introduce the study of human movement, physical activity, exercise, and dance emphasizing movement classifications, foundational terminology, and movement observation skills. Enrollment limited to students with less than 90 credit hours.

KNS 2290(2)
Lifetime Fitness
Fall, Spring. Development of, participation in and instructional strategies for exercise training programs. Discussion of lifetime fitness to enhance well-being. One one-hour lecture, one two-hour laboratory.

KNS 2300(3)
Structural and Functional Bases of Human Movement
Fall, Spring, Summer. The study of functional anatomy as applied to human movement. Two one-hour lectures; one two-hour laboratory. Prerequisites: C or better in BIOL 1040, BIOL 2050 or KNS 2270. Extra fee.

KNS 2320(2)
Advanced Performance and Content Development in Invasion Games
Fall. Skill/strategy development for advanced performance/understanding of invasion games and content progression. One 1-hour lecture/one 2-hour laboratory.

KNS 2330(2)
Advanced Performance and Content Development in Net/Wall Games
Spring. Skill/strategy development for advanced performance/understanding of net/wall games and content progression. One 1-hour lecture/one 2-hour laboratory.

KNS 2340(1)

Advanced Performance and Content Development in Field Games
Fall. Skill/strategy development for advanced performance/understanding of field games and content progression. One 2-hour laboratory.

KNS 2350(1)

Professional Reading and Writing in Physical Education
On demand. Reading and interpretation of literature in physical education; writing professional paper; treatment of pertinent statistical techniques. Prerequisite: GSW 1120.

KNS 2380(3)

Advanced Performance and Content Development in Educational Gymnastics
Spring. Advanced movement quality and content integration in educational gymnastics. One one-hour lecture, one two-hour laboratory. Prerequisite: KNS 1380. C/F hrs.: 30.

KNS 2410(2)

Educational Games Teaching to Children
Fall. Movement approach to games/sports with special emphasis on program content, methodology and progression. One lecture, one laboratory. Prerequisite: KNS 1370, KNS 1380 or permission of instructor. C/F hrs.: 40.

KNS 2420(2)

Human Movement in Early Childhood
Fall, Spring, Summer. Contributions of movement experiences to the development of young children, birth-age 8. Planning/presenting developmentally appropriate activities. Thematic integration with other subjects as appropriate. One lecture/one laboratory. Extra fee.

KNS 2430(2)

Human Movement in Middle Childhood
Fall, Spring, Summer. Contributions of movement experiences to development of young children, age 8-14. Planning/teaching developmentally appropriate activities. Thematic integration with other subjects as appropriate. Two lectures.

KNS 2470(3)

Introduction to Teaching Physical Education
Fall, Spring. Introduction to the teaching of early childhood-young adult physical education. Two one-hour lectures, one two-hour laboratory. Prerequisites: KNS 1370 or KNS 1380; Minimum score 22 ACT or 172 on each Praxis I test. C/F hrs.: 32. Extra fee.

KNS 3120(3)

Instructional Strategies in Physical Education
Fall, Spring, Summer. Developing and enhancing effective instructional strategies within physical education environments toward the teaching goal of developing skillful movers. Prerequisite: KNS 2470.

KNS 3130(2)

Cardiopulmonary Resuscitation, First Aid, and Safety
Fall, Spring, Summer. Provides knowledge and training in the prevention and treatment of accidents, injuries, and procedures of basic life support. Satisfactory completion may result in American Red Cross certification. Participation in skill practice required. One one-hour lecture, one two-hour laboratory. Extra fee.

KNS 3140(1)

Instructors Advanced First Aid and Emergency Care
Fall, Spring. Successful completion may lead to advanced instructor's certificate by the American Red Cross. One one-hour lecture, one one-hour lab. Prerequisites: junior standing and valid American Red Cross advanced first aid certificate. Extra fee.

KNS 3150(1)

Cardiopulmonary Resuscitation Recertification
Fall, Spring, Summer. Basic life support for victim of sudden cardiac arrest and/or respiratory failure. Satisfactory completion may result in American Red Cross Certification. Participation in skill practice required. One two-hour lab. Prerequisites: junior standing and prior CPR Certification. May be repeated. Extra fee.

KNS 3220(2)

Water Safety Instructor's Course
Fall on demand, Spring. Successful completion certifies student to conduct and to certify Red Cross swimming and lifesaving courses except WSI. One lecture, one laboratory. Prerequisites: current advanced lifesaving certificate and consent of instructor. Eligibility testing conducted first week of course. Extra fee.

KNS 3280(3)

Principles, Ethics and Problems of Coaching
Fall, Spring. Non-technical, off-the-field aspects of athletic coaching educational implications; coaching ethics; public relations; equipment; financing; liability; coach-athlete rapport.

KNS 3290(3)

Coaching Football
Fall. Development of personal skills and understandings in football; team administration, organization, philosophy, theory, fundamentals, strategy, methods and responsibilities of coaching football. Two lectures, two lab hours per week. Prerequisite: sophomore standing.

KNS 3310(2)

Coaching Basketball
Spring. Administration, organization, philosophy, theory, strategy, methods and responsibilities of coaching basketball. One lecture, two lab hours per week. Prerequisite: KNS 2030-Basketball.

KNS 3370(3)
Advanced Performance and Content Development in Educational Dance
Spring. Advanced movement quality and content integration in educational dance. Two one-hour lectures, one two-hour laboratory. Prerequisites: KNS 1370, DANC 1010, and DANC 1020. C/F hrs.: 30.

KNS 3390(2)
Coaching of Interscholastic Sports: A Practicum
Fall, Spring. Offers prospective coaches instruction in planning, teaching, administrative functions, safety, and liability essential to effective coaching. Taken during semester in which selected sport is in season. One lecture hour and arranged practicum hours. Prerequisites: KNS 3130 and KNS 3280.

KNS 3400(3)
Motor Development Across the Lifespan
Fall. Changes in human movement over the lifespan and the theoretical and empirical reasons for those changes. Two one-hour lectures, one two-hour laboratory. Prerequisites: KNS 2300, PSYC 1010. Extra fee.

KNS 3500(3)
Motor Learning
Spring. Principles/theories of learning and memory applied to motor skill acquisition. Emphasis on factors influencing and the development of successful instructional and training strategies. Two one-hour lectures, one two-hour laboratory. Prerequisites: KNS 2300, MATH 1120 or higher. Extra fee.

KNS 3550(2)
Socio-cultural and Psychological Foundations of Teaching Physical Education
Fall. Socio-cultural and psychological foundations of physical education curriculum and instruction. Two, 1-hour lectures.

KNS 3560(3)
Historical, Philosophical and Curricular Foundations of Physical Education
Spring, Summer on demand. The study of history, philosophy, and curriculum as related to physical education. Three lecture hours. Prerequisite: KNS 2470.

KNS 3600(3)
Exercise Physiology
Fall, Spring. The immediate and long-range effects of exercise upon the human body. Two one-hour lectures, one two-hour laboratory. Prerequisites: BIOL 1040 or BIOL 2050; and BIOL 3320 or KNS 2300; and MATH 1120 or higher. Extra fee.

KNS 3610(3)
Applied Exercise Physiology
Spring. Basic concepts and mechanisms of human physiology applied to exercise testing and training, practical assessments, and laboratory instrumentation. One two-hour lecture, one two-hour laboratory. Prerequisite: KNS 3600. Extra fee.

KNS 3700(3)
Biomechanics of Human Movement
Fall and Spring. Application of principles of mechanics to the study of human motion. Emphasis placed on theory and quantitative analysis. Two 1-hour lectures and one 2-hour laboratory. Prerequisites: KNS 2300 or BIOL 3310, and MATH 1120 or higher, and PHYS 1010 or PHYS 2010. Extra fee.

KNS 3870(1 - 5)
Practicum
Fall, Spring, Summer. Under supervision of KNS Division of Human Movement, Sport, and Leisure Studies. Petitioning and approval required of each student before registration. Credit hours for each experience approved separately by program area. May be repeated if topics differ. Prerequisite: Approval of appropriate KNS Division faculty. Extra fee.

KNS 3950(1 - 3)
Workshop on Current Topics in Kinesiology
On demand. Intensive study of selected topics in kinesiology. May be repeated up to 12 hours if topics are different.

KNS 4000(3)
Facilitating Movement Change in a Tutorial Setting
Fall, Spring. Application of the principles of motor skill instruction to a tutorial setting. Two one-hour lectures, one two-hour laboratory. Prerequisites: KNS 3400, KNS 3500, KNS 3600, and KNS 3700.

KNS 4020(3)
Measurement and Evaluation of Human Movement
Spring. Measurement and evaluation principles and applications for integrating assessment of learning outcomes for clinical practices in human movement and physical activity. Two, 1-hour discussion-recitations; one, 2-hour laboratory. Prerequisite: MATH 1120 or higher. C/F hours: 40. Extra fee.

KNS 4230(3)
Exercise Testing and Prescription
Fall. Selection, design, and application of exercise testing and exercise prescription principles. Three one-hour lectures. Prerequisite: KNS 3600.

KNS 4250(3)
Exercise Testing and Prescription for Special Cases
Spring alternate years, Summers on demand. Overview of exercise testing, electrocardiogram (EKG) interpretation, and exercise prescription for monitoring exercisers with special conditions due to age or disease (e.g., cardiac disease and abnormalities, hypertension, obesity, diabetes, etc.). Three, 1-hour lectures. Prerequisite: KNS 4230 or permission of instructor.

KNS 4290(3)
Sport Conditioning
Fall. Theory and application of biomechanical and physiological principles to the development of strength and conditioning programs for selected sports. Three one-hour lectures. Prerequisites: KNS 2300 and KNS 3600 or consent of instructor.
KNS 4320 (3)
Teaching-Learning Process in Early-Middle Childhood Physical Education
Fall, Spring. Refining the teaching-learning process in early-middle childhood physical education. Two 1-hour lectures/one 2-hour laboratory. Prerequisites: KNS 1370, KNS 1380, KNS 3120, and PETE Program Admission. Extra fee.

KNS 4330 (3)
Adapted Physical Activity
Fall, Spring. Principles, objectives, history and programming of adapted physical activity with an overview of disabilities in physical activity settings. Three one-hour lectures. Prerequisites: EDFI 3020 or EDFI 3030; and KNS 2470 or EDHD 2100. C/F hrs.: 28.

KNS 4400 (3)
Designing and Directing Exercise Programs
Spring. Objectives, transactions, and procedures to conduct professional physical activity programs. Three one-hour lectures. Prerequisites: KNS 3870 and KNS 4230.

KNS 4610 (3)
Instructor's Driver Education
Summer. First of two courses required leading to certification in the state of Ohio. Provides teacher with introduction to traffic problems in our society and overview of existing driver education programs. Two one-hour lectures and one two-hour lab. Prerequisites: junior standing and driver's license. C/F hrs.: 5. Extra fee.

KNS 4620 (3)
Advanced Instructor's Driver Education
Summer. Second of two courses required to qualify a student for state certification in driver education; student learns to organize, administer and teach driver education in Ohio secondary schools. Emphasis on laboratory experience involving Transportation Research Center. Two one-hour lectures, one two-hour lab. Prerequisite: KNS 4610. C/F hrs.: 15. Extra fee.

KNS 4700 (1 - 3)
Independent Study in Kinesiology
Fall, Spring, Summer. An in-depth study project of a topic of particular significance to the student. Project must be approved by project supervisor and Kinesiology Division Chair prior to registration. May be repeated if topic is different. Prerequisite: By permission of instructor.

KNS 4720 (3)
The Teaching-Learning Process in Middle Childhood-Young Adult Physical Education
Fall, Spring. Refining the teaching-learning process in middle childhood-young adult physical education. Two 1-hour lectures/one 2-hour laboratory. Prerequisites: KNS 3120 and Admission to PETE Program.

KNS 4810 (4)
Senior Project
Fall, Spring, Summer. Culminating experience in study of human movement. Students work in groups to conceptualize, carry out and report a research project on topic within human movement science. Prerequisites: KNS 4000 and SM 2140 or consent of instructor.

KNS 4870 (1 - 5)
Practicum
Fall, Spring, Summer. Under supervision of KNS Division, School of Human Movement, Sport and Leisure Studies. Petitioning and approval required of each student before registration. Credit hours for each experience approved separately by program area. May be repeated if topic is different. Prerequisite: Approval of appropriate KNS division faculty. Extra fee.

KNS 4890 (15)
Exercise Specialist Internship
Fall, Spring, Summer. Field experience at approved sites. Prerequisites: matriculation into the Exercise Science program, satisfactory completion of KNS 3870, current CPR and First Aid certifications and approval of field experience application. Extra fee.

KNS 4920 (1 - 16)
Early-Middle Childhood Physical Education Internship
Fall, Spring. Physical education teaching on full-day basis under supervision in early childhood-middle childhood schools. Prerequisites: full PETE program acceptance; 2.5 GPA; 90 semester hours; PSYC 1010; EDFI 3020; KNS 4320; KNS 4720; passing score on Praxis II Physical Education Content Knowledge. May be repeated. Extra fee.

KNS 4970 (1 - 12)
Middle Childhood-Young Adult Physical Education Internship
Fall, Spring. Physical education teaching on full-day basis under supervision in middle childhood-young adult schools and an on-campus seminar. Prerequisites: full PETE program acceptance; 2.5 GPA; 90 semester hours; PSYC 1010; EDFI 3020; KNS 4320; KNS 4720; passing score on Praxis II Physical Education Content Knowledge. May be repeated. Extra fee.

Subject: Latin
LAT 1010 (4)
Elementary Latin I
Fall. Cultural approach to beginning language. Development of the four skills: listening, speaking, reading, writing. Four class periods and laboratory practice each week.

LAT 1020 (4)
Elementary Latin II
Spring. LAT 1010 continued. Four class periods and laboratory practice each week. Prerequisite: LAT 1010 or one year of Latin in high school.

LAT 2010 (3)
Intermediate Latin I
Fall. Grammatical review and reading of ancient Latin texts. Prerequisite: LAT 1020 or two years of Latin in
LAT 2020 (3)  
Intermediate Latin II  
Spring. Grammatical review and reading of ancient Latin texts. Prerequisite: LAT 2010 or three years of Latin in high school. Applicable to the BG Perspective (general education) humanities and arts and international perspective requirements.

LAT 3510 (3)  
Latin Prose Composition I  
Developing increased ability to understand structural peculiarities of classical Latin. Prerequisite: LAT 2020.

LAT 3520 (3)  
Latin Prose Composition II  
Developing increased ability to understand structural peculiarities of classical Latin. Prerequisite: LAT 3510.

LAT 3610 (3)  
Latin Literature I  
Fall. Grammatical review and advanced reading of ancient Latin texts. Prerequisite: LAT 2020 or consent of section leader and instructor.

LAT 3620 (3)  
Latin Literature II  
Spring. Grammatical review and advanced reading of ancient Latin texts. Prerequisite: LAT 2020 or consent or section leader and instructor.

LAT 4510 (3)  
Advanced Latin Prose Composition  

LAT 4700 (1 - 3) Readings in Latin Literature  
On Demand. Advanced reading for students wishing to study special period or great author. Prerequisites: LAT 3620 or consent of Classical Studies section leader and instructor. May be repeated with different topics up to 6 credits.

Subject: Legal Studies

LEGS 1900 (3)  
Ethics and Responsibility in Business  
An introduction to current ethical issues as applied to business. Examination of the ethical dilemmas, failures, successes in contemporary American business; differences between law and ethics; the social responsibility of business; other current topics in business ethics.

LEGS 3010 (3)  
Legal Environment of Business  
Fall, Spring, Summer. Fundamentals of the structure of the American legal system, contracts, torts, ethics and social responsibility of business, property, and selected topics related to the legal environment in which businesses operate. Credit not allowed for both LEGS 3010 and LEGS 4010. Prerequisite: junior standing.

LEGS 3040 (3)  
Law for Entrepreneurs  
Legal issues related to new business ventures including the choice of entity, financing issues, contracts, employment, intellectual property, potential areas of liability, and methods of sale of the business. Prerequisite: BA 2040.

LEGS 3050 (3)  
Comparative Legal Philosophy  
Spring. Legal philosophy and comparative law using legal systems of Western, Communist and developing countries as models; treatment of commercial obligations and constitutional rights within different legal systems.

LEGS 4010 (4)  
Business Law I  
Fall. Business law including study of contracts, sales, secured transactions, negotiable instruments, bankruptcy and suretyship. No credit for students who have taken LEGS 3010. Recommended for accounting students planning on taking the CPA examination.

LEGS 4020 (4)  
Business Law II  
Spring. Business law including accountant legal liability, agency, partnerships, corporations, securities, property, bailments, trusts and wills, insurance, and professional responsibility. Prerequisite: LEGS 3010 or LEGS 4010. Recommended for accounting students planning on taking the CPA examination.

LEGS 4060 (3)  
International Business Transactions  
Spring alternate years. Legal problems faced by individual and corporate business persons when operating within international framework. Methods of control of multinational corporate entities, effect of doing business as national or foreign firm and act of state doctrine relating to expropriation of assets of foreign firm. Prerequisite: junior standing.

LEGS 4100 (3)  
Business, Individuals and the Constitution  
Fall. An analysis of economic and individual rights of U.S. citizens and businesses and their relationship with state and federal government. Topics of constitutional import will be featured. Prerequisite: junior standing.
LEGS 4190(3)
Employment Law I
Fall. A discussion of federal and state labor laws regulating (a) labor union and management relationships, (b) plant closings, (c) safe and healthy working environment, (d) employment of immigrants and aliens, (e) privacy (polygraph usage and drug testing) in the workplace, (f) employment at will and for term, and (g) wrongful discharge. Prerequisite: junior standing.

LEGS 4230(3)
Computer and Technology Law
Spring. Developing law concerning computers and technology, including acquisition of computer hardware and software, remedies for failure of a computer system, computer crime, privacy, liability, and intellectual property. Prerequisite: junior standing.

LEGS 4250(3)
Health Care Law
Fall. Survey of the law governing health care administration. Topics include: medical malpractice, licensing and certification standards, profit and nonprofit corporations, director and officer liability, regulation of health care financing. Prerequisite: junior standing.

LEGS 4290(3)
Employment Law II
Spring. Discussion of laws focusing on the prohibition of discrimination and harassment on the basis of race, color, national origin, sex, religion, age and handicap, and veterans; and on wage and salary discrimination using equal pay and comparable worth analysis. Prerequisite: junior standing.

LEGS 4310(3)
Environmental Law
Spring. History and development of modern concepts in environmental law; air, water, land, toxic waste; legal solutions to environmental problems. Prerequisite: junior standing.

LEGS 4500(3)
Hospitality Law
Spring. Legal regulations, duties, liability and relationships of persons and businesses engaged in the food service, restaurant, hotel/motel and hospitality industries. Prerequisite: junior standing.

LEGS 4900(3)
Legal Research and Writing
Legal research and writing that requires use of primary and secondary legal resources. Series of projects to develop competencies in legal research and writing culminates in a major legal research and writing project that is presented and defended. Prerequisite: junior standing.

LEGS 4910(1 - 3)
Studies in Business Law
On demand. In-depth study of selected areas of law. Offered to individual or to small groups of students on a lecture, seminar, or independent study basis, depending on student need and nature of material. May be repeated to six hours. Prerequisite: consent of chair of department and instructor.

Subject: University Libraries
LIB 1120(3)
Living in the Information Age
Explores the effects of the information explosion on the individual and society. Introduces basic literacy skills, such as locating and evaluating information.

LIB 2210(1)
Research in the Electronic Library I
Fall, Spring. Study of electronic research and Internet communication. Introduction to the technology that allows electronic access to information sources and the evaluation of these sources.

LIB 2220(2)
Research in the Electronic Library II
Fundamental concepts of information and electronic access to information resources, search strategies, electronic database features, scholarly communication, societal implications of electronic information.

LIB 2250(3)
Information Seeking and Management in Contemporary Society
Online. Fall, Spring and Summer. Examination of interdisciplinary topics in the context of identifying, evaluating, synthesizing, and ethically using information. Critical analysis of and discussions about issues related to the information age and how these issues have an impact on higher education and the work place. Prerequisite: Successful completion of GSW 1120.

Subject: Mathematics & Statistics
MATH 90(3)
Elementary Algebra
Fall, Spring and Summer. Fundamental topics of beginning algebra. Intended for students having no previous algebra experience. Credit for this course cannot be applied toward any degree program. Graded A, B, C/No Record.

MATH 95(3)
Intermediate Algebra
Fall, Spring. Number systems, fundamentals of algebra, graphs and equations of straight lines, exponents, polynomial expressions, factoring, rational expressions, roots, the quadratic formula; applications. Prerequisite: Satisfactory placement exam score or grade of C or higher in MATH 90. Credit for this course cannot be applied toward any degree program. Graded A, B, C/No Record.

MATH 1120(3)
College Algebra I
Fall, Spring, Summer. Graphing, algebra, functions and their graphs, factoring, polynomials, rational expressions, rational exponents, linear and quadratic functions and their applications. Not open to students with a grade of C or higher in MATH 1200, MATH 1220, MATH 1280, or MATH 1300. No more than 6 credit hours in MATH 1120, MATH 1200, and MATH 1220 may be counted toward graduation. Prerequisites: Two years of high school
algebra, one year of geometry and a satisfactory placement exam score, or grade of C or higher in MATH 95.

**MATH 1150(3)**

Introduction to Statistics

Fall, Spring, Summer. Description of data, binomial and normal distributions, estimation and testing hypotheses for means and proportions. Prerequisites: Two years high school algebra, one year of geometry and a satisfactory placement exam score.

**MATH 1160(3)**

Introduction to Statistics II

MATH 1150 continued. Nonparametric methods, linear regression and correlation, analysis of variance. Prerequisite: grade of C or higher in MATH 1150 or consent of instructor.

**MATH 1200(5)**

College Algebra

Fall, Spring, Summer. Polynomials, factoring, rational exponents, linear and quadratic equations and inequalities; applications; polynomial, exponential and logarithmic functions and their graphs, systems of equations, theory of equations. Not to be taken if credit for MATH 1280 or MATH 1300 has been received. No more than 6 credit hours in MATH 1120, MATH 1200, and MATH 1220 may be counted toward graduation. Prerequisites: Two years of high school algebra, one year of geometry and a satisfactory placement exam score. or grade of C or higher in MATH 95.

**MATH 1220(3)**

College Algebra II

Fall, Spring, Summer. Review of functions and their graphs, linear and quadratic functions, factoring. Polynomial and rational functions. Review of exponents. Exponential and logarithmic functions and their graphs. Systems of equations, theory of equations. Not open to students with a grade of C or higher in MATH 1200, MATH 1220, MATH 1280, or MATH 1300. No more than 6 credit hours in MATH 1120, MATH 1200, and MATH 1220 may be counted toward graduation. Prerequisites: Two years of high school algebra, one year of geometry and a satisfactory placement exam score, or grade of C or higher in MATH 1120, or grade of D in MATH 1200.

**MATH 1230(4)**

Mathematics for Architecture/Construction

Fall, Spring. Units and unit conversions; geometry; trigonometry of angles; laws of cosines and sines; solving triangles; vectors; conceptual introduction to differential and integral calculus. This course is specifically designed to prepare students for required courses in the Architecture and Construction Management programs. Prerequisite: Grade of C or higher in MATH 1200 or MATH 1220, or satisfactory placement exam score.

**MATH 1260(5)**

Basic Calculus

Fall, Spring, Summer. Differential and integral calculus, multivariate differential calculus and matrix theory; applications. Not open to students with a grade of C or higher in MATH 1310 or MATH 1350. Prerequisite: a grade of C or higher in MATH 1200, MATH 1220, MATH 1280, or MATH 1300; or two years of high school algebra and one of geometry AND a satisfactory placement exam score.

**MATH 1280(5)**

Precalculus Mathematics

Fall, Spring, Summer. Basic algebra; inequalities; functions and graphs; logarithmic and exponential functions; trigonometric functions and identities; applications and other topics. Not to be taken if credit for MATH 1290 or MATH 1300 has been received. Only earns 3 hours of credit toward graduation if credit for MATH 1200 or MATH 1220 has been received. Prerequisites: Two years of high school algebra and one of geometry AND a satisfactory placement exam score, or grade of C or higher in MATH 1200 or MATH 1220.

**MATH 1290(2)**

Trigonometry

Fall, Spring. Trigonometric functions, graphs, identities, equations, inverse functions, solution of triangles, complex numbers. Intended for students who have good preparation in algebra and geometry but lack knowledge of trigonometry. Not to be taken if credit for MATH 1280 or MATH 1300 has been received. Prerequisite: C or higher in MATH 1200 or MATH 1220 or consent of instructor.

**MATH 1300(3)**

Precalculus Mathematics

Fall, Spring. Theory of equations, coordinate geometry, exponential, logarithmic and trigonometric functions, applications. Overlaps with content of MATH 1280 and MATH 1290. Not to be taken if credit for MATH 1280 or MATH 1290 has been received. Prerequisites: two years of high school algebra, one year of high school geometry and a satisfactory placement exam score, or grade of C or higher in MATH 1200 or MATH 1220.

**MATH 1310(5)**

Calculus and Analytic Geometry

Fall, Spring, Summer. Differential and integral calculus including applications. The MATH 1310-2320-2330 sequence is a traditional calculus course for well-prepared students and is prerequisite for all advanced mathematics and statistics courses. Prerequisites: (1) two years of high school algebra, one year of geometry, one-half year of trigonometry, ACT math score of 24 or higher and satisfactory score on department placement test; or (2) grade of C or higher in MATH 1280, MATH 1290 or MATH 1300.

**MATH 1340(3)**

Calculus and Analytic Geometry I A

Fall, Spring. Limits, the derivative, differentiation techniques and applications of the derivative. MATH 1340 and MATH 1350 is a two-semester sequence which includes all the topics from MATH 1310. Not open to students with a grade of C or higher in MATH 1310 or MATH 1260. Prerequisites: same as MATH 1310.

**MATH 1350(3)**

Calculus and Analytic Geometry IB

Fall, Spring, Summer. The definite integral; the fundamental theorem; indefinite integrals; integration by parts, by substitution and using tables; and applications of definite and indefinite integrals. Prerequisite: grade of C or higher in MATH 1340.

**MATH 2130(3)**

Mathematics for Early Childhood Teachers
Fall, Spring. Numeration systems and number sense. Development of the whole numbers, integers, rationals and real numbers. Notions of fractions, decimals, percents, ratio and proportion from an applied perspective. Measurement of geometric figures. Open only to education majors. Prerequisite: satisfactory score on MATH 2130 placement test or grade of C or better in MATH 90.

MATH 2150(3)
Number Systems for Middle School Teachers
Fall, Spring. Integers, rationals, irrationals, decimals, real and complex number systems. Properties of numbers. Number theory. Proportional reasoning. Percents. Relations and functions. Algebra. Set theory. Tables and graphs. Open only to education majors. Prerequisite: satisfactory score on MATH 2150 placement test or grade of C or better in MATH 90.

MATH 2160(3)
Geometry for Middle School Teachers

MATH 2220(3)
Discrete Mathematics
Fall, Spring. Logic, methods of proof, introduction to set theory, relations, functions, algorithms, counting techniques, graph theory, and trees. Credit not given for both MATH 2220 and MATH 3220. Prerequisite: C or better in MATH 1260, MATH 1310, or MATH 1350. The web-based section is open only to Computer Science students.

MATH 2320(5)
Calculus and Analytic Geometry II
Fall, Spring. MATH 1310 continued. Calculus of transcendental functions, techniques of integration, plane analytic geometry, sequences, and series. Prerequisite: grade of C or higher in MATH 1310 or MATH 1350.

MATH 2330(3)
Calculus and Analytic Geometry III
Fall, Spring. Vectors and vector-valued functions, analytic geometry in space, partial derivatives, multiple integrals, applications. MATH 2330 and MATH 2340 is a two-semester sequence which includes all of the topics from MATH 2350. Not open to students with a grade of C or higher in MATH 2350. Prerequisite: grade of C or higher in MATH 2320.

MATH 2340(1)
Vector Fields
Fall, Spring. Vector fields, line integrals, Green's theorem, curl and divergence, surface integrals, the divergence theorem, Stokes' theorem, applications. Not open to students with a grade of C or higher in MATH 2350. Prerequisite: grade of C or higher in MATH 2330 or consent of instructor.

MATH 2350(4)
Calculus and Analytic Geometry III with Vector Fields
Fall, Spring. Vectors and vector-valued functions, analytic geometry in space, partial derivatives, multiple integrals, line integrals, Green's theorem, curl and divergence, surface integrals, the divergence theorem, Stokes' theorem, applications. Not open to students with a grade of C or higher in MATH 2350. Prerequisite: grade of C or higher in MATH 2320.

MATH 2450(3)
Statistics for Middle School Teachers
Fall, Spring. Descriptive statistics for one and two variables, sample spaces and probability rules, discrete and continuous probability models, use of simulation to compute probabilities. Open only to education majors. Prerequisite: C or better in MATH 1260, MATH 1310, or MATH 1350.

MATH 2470(3)
Fundamentals of Statistics
Fall, Spring. Descriptive statistics. Discrete probability models, sampling distributions, statistical estimation, and testing. Prerequisite: C or better in MATH 1260, MATH 1310, or MATH 1350. Credit not given for both MATH 2470 and STAT 2110.

MATH 2950H(1)
Honors Course in Mathematics
Series of lectures by various department members surveying major areas of mathematics. To be taken after completion of MATH 1110. May be repeated for credit, up to a total of 3 hours. Prerequisite: invitation of department.

MATH 3130(3)
Elementary Mathematical Logic
Fall. Propositional and predicate logic; nature of mathematical proof; applications to mathematics and computer science. Prerequisite: C or better in MATH 1310 or MATH 1350.

MATH 3220(3)
Discrete Mathematics
Fall, Summer. Sets, functions, relations, algorithms, induction, elementary combinatorics, graph theory, the propositional calculus and other topics. A student cannot receive credit for both MATH 2220 and MATH 3220. MATH 3220 is recommended for majors or minors in mathematics. Corequisite: MATH 2320 or consent of instructor.

MATH 3320(3)
Elementary Linear Algebra
Fall, Spring. Systems of linear equations, vectors, matrices, determinants, linear transformations, vector spaces and applications. Techniques and some proofs. Prerequisite: C or better in MATH 2320.

MATH 3370(3)
Differential Equations
Fall, Spring. Introduction to ordinary differential equations: general equations of low order, higher order linear equations with constant coefficients, series solutions, qualitative theory and systems of differential equations. Prerequisite: C or higher in MATH 2330 or MATH 2350.
MATH 3390(3)
Fundamental Concepts of Modern Algebra
Fall, Spring. Elementary topics from rings, fields and groups: divisibility properties of the integers; integral domains; construction of the rational, real and complex number systems; polynomial rings. MATH 3390 should not be used as an elective for students in the College of Arts and Sciences. Prerequisite: C or better in MATH 3220 and MATH 3320 or consent of instructor.

MATH 3410(3)
Principles of Probability and Statistics
Fall, Spring. Summary and display of data; basic probability concepts; discrete distributions; continuous distributions; computer-aided probabilistic and statistical modeling of real problems; estimation; tests of statistical hypotheses. Not open to students who have credit for MATH 4410. Prerequisite: C or better in MATH 2320 or consent of instructor.

MATH 3420(3)
Introduction to Statistical Practice
Introduction to statistical methodology through the use of case studies. Data collection, exploratory methods, inferential methods including multiple regression, nonparametric tests, analysis of variance, and chi-square statistics. Prerequisites: C or higher in MATH 1310 and C or higher in MATH 2470 or MATH 3410 or MATH 4410 or PSYC 2700 or SOC 3690 or STAT 2110.

MATH 3950H(1)
Honors Course in Mathematics
A choice of two experiences: (1) a problem-solving seminar, or (2) use of the mathematics library to conduct a search for articles related to a selected topic. Prerequisite: invitation of department.

MATH 4000(3)
Topics in Mathematics
Selected topics in mathematics not included in existing courses. May be taken twice for credit. Prerequisite: consent of instructor.

MATH 4010(3)
Number Theory
Fall odd years. Divisibility, prime numbers, linear congruences, Chinese Remainder Theorem, quadratic residues, Lagrange and Cayley's theorems, factor groups, abelian groups, direct products; integral domains, ideals and factor rings, ring isomorphisms, polynomial rings. Prerequisites: C or better in MATH 3220 and MATH 3320, or consent of instructor.

MATH 4020(3)
Modern Geometry
Fall, Spring. Axiomatic development of neutral and Euclidean geometry; introduction to non-Euclidean geometry. Prerequisite: C or better in MATH 3220 and MATH 3320, or consent of instructor.

MATH 4030(3)
Modern Algebra I
Fall. Topics from groups and rings; normal subgroups, homomorphisms, cyclic groups, permutation groups, Lagrange's and Cayley's theorems, factor groups, abelian groups, direct products; integral domains, ideals and factor rings, ring isomorphisms, polynomial rings. Prerequisites: C or better in MATH 2330 or MATH 2350, and C or higher in MATH 3220 and MATH 3320, or consent of instructor.

MATH 4040(3)
Modern Algebra II
Spring. Continuation of topics from MATH 4030; vector spaces, extensions of fields, finite fields. Prerequisite: C or better in MATH 4030 or consent of instructor.

MATH 4110(3)
History of Mathematics
Fall, Spring. History of Mathematics through Calculus. Prerequisite or corequisite: MATH 3320.

MATH 4150(3)
Advanced Mathematical Topics for Middle School Teachers
Fall, Spring. History of mathematics, direct and indirect proof, induction, mathematical systems, binary operations, finite geometries, non-Euclidean geometry. Open only to middle school education majors. Prerequisites: C or better in MATH 2150 and MATH 2160, and in either MATH 2220 or MATH 3220, and in one of MATH 2450, MATH 2470, or MATH 3410, or consent of instructor.

MATH 4170(3)
Advanced Mathematical Topics for Early Adulthood Teachers
Fall, Spring. Topics from the middle and secondary school mathematics curricula presented from an advanced point of view. Topics include the development of various number systems, the meaning of area, the fundamental theorem of calculus, infinite cardinalities and classical problems of geometry. History of mathematics integrated into course. Prerequisites: C or better in MATH 3320 and MATH 3390. Corequisite: EDTL 4740 or consent of instructor.

MATH 4210(3)
Foundations of Mathematics
Logic; set theory (including informal discussion of infinite sets and cardinals); axiomatic method (including models, consistency, and independence). Prerequisite: C or better in MATH 3390 or MATH 4030 or consent of instructor.

MATH 4250(3)
Theory of Interest
Spring even years. General theories of interest, annuities, yield rates, amortization schedules and sinking funds, bonds and other securities and additional topics in financial analysis. Prerequisite: C or better in MATH 2320 or consent of instructor.

MATH 4260(3)
Actuarial Mathematics I
Fall. Brief introduction to annuities certain; survival distributions and life tables, life insurance, life
annuities, net premiums, net premium reserves. Intended to prepare students for actuarial examinations. Prerequisite: C or better in MATH 4410.

**MATH 4270(3)**
**Actuarial Mathematics II**
Spring. Multiple life functions; multiple decrement models; valuation theory for pension plans; insurance models including expenses, nonforfeiture benefits and dividends. Prerequisite: C or better in MATH 4260.

**MATH 4340(3)**
**Linear Algebra with Applications**
Spring. Matrices and vector spaces, eigenvalues, orthogonal matrices, positive definite matrices, quadratic forms. Applications to differential equations, Markov chains, least squares. Prerequisite: C or better in MATH 3120 or consent of instructor.

**MATH 4370(3)**
**Qualitative Theory of Differential Equations**
Existence theorems for linear and nonlinear equations, systems of first order linear equations, nonlinear equations and stability, applications. Prerequisite: C or better in MATH 3370.

**MATH 4410(3)**
**Probability and Statistics I**
Fall, Summer. Axiomatic probability; conditional probability; random variables/vectors; distribution functions; expectations; moment-generating functions; functions of random variables/vectors; random sampling and sampling distributions; central limit theorem; weak law of large numbers. Prerequisite or corequisite: MATH 2330 or MATH 2350.

**MATH 4510(3)**
**Numerical Analysis**
Fall. Study of numerical methods for interpolation and approximation, integration and differentiation, solution of non-linear equations and systems of linear and non-linear equations. Prerequisites: C or better in MATH 3320 and programming experience. Not open to students with credit for CS 4510.

**MATH 4520(3)**
**Numerical Analysis**
Spring of odd years. Probability models for applications, finite Markov chains, queueing systems, Poisson processes, applications to genetics, diffusion, computer systems. Prerequisites: C or better in MATH 3320 and MATH 4510 or CS 4510. Not open to students with credit for CS 4520.

**MATH 4610(3)**
**Introduction to Complex Analysis**
Spring odd years. Complex numbers, complex valued functions, differentiation of complex valued function, analytic functions, power series, integration, contour integrals, residues and poles, conformal mapping, applications. Prerequisites: C or higher in MATH 3320 or MATH 3250, and C or higher in MATH 3320, or consent of instructor.

**MATH 4650(3)**
**Introduction to Real Analysis I**
Fall. Completeness and order axioms; limits of sequences; limits of functions and continuity; open, closed and compact sets; uniform continuity; differentiation and the mean value theorem; the Riemann integral. Prerequisites: C or higher in MATH 3320 or MATH 2350, and C or higher in MATH 3320 or consent of instructor.

**MATH 4660(3)**
**Introduction to Real Analysis II**
Spring. The Riemann-Stieltjes integral; sequences of functions; series of real numbers; series of functions; and optional topics selected from transcendental functions, special functions, Fourier series and metric spaces. Prerequisite: C or better in MATH 4650 or consent of instructor.
Readings in Mathematics  
Independent study of a topic of particular interest to an advanced student under the direction of a faculty member. May be repeated. Prerequisites: consent of instructor and chair of department.

MATH 4890(1 - 4)  
Internship  
Internship for majors in mathematics or statistics in the cooperative education program. Written report required. May be repeated with permission. Does not apply toward major or minor. Prerequisite: permission of department. Graded S/U.

MATH 4950H(1)  
Honors Course in Mathematics  
Directed study in some field of mathematics; preparation and presentation of research topic. To be taken concurrently with two or more hours of MATH 4700. Prerequisite: invitation of department.

Subject: Materials Science  
MATS 1000(3)  
Materials in the Service of Society  
Basic concepts of materials science and the role materials have played in history and in our daily lives. For students not majoring in science. Not counted toward a major in any natural sciences. Two one-hour lectures and one two-hour laboratory. No prerequisites. Applicable to the BS Perspective (general education) natural sciences requirement.

MATS 4010(3)  
Survey of Materials Science I  
Basic concepts of materials science. Crystalline materials, dislocations, elastic properties, polymers, ceramics and corrosion. For students majoring in science or technology. Two one-hour lectures and one three-hour laboratory. Prerequisites: college algebra and introductory course in physics or chemistry.

MATS 4020(3)  
Survey of Materials Science II  
Continuation of MATS 4010. Electrical, electronic, magnetic and optical properties of materials, with specific focus on modern applications and instrumentation. Surface science and its application in the assessment and development of novel materials. Prerequisite: MATS 4010.

MATS 4700(1 - 3)  
Independent Study in Materials Science  
On demand. Research in materials science; projects chosen in consultation with adviser and will include library and laboratory work. May be repeated. Prerequisite: consent of instructor.

Subject: Medical Technology  
MEDT 1010(1)  
Introduction to Health Professions  
Survey of health and human service professions and the function of health care personnel within these professions.

MEDT 2010(2)  
Orientation to the Professions of Medicine/Medical Technology  
Spring. Professional aspects of medical technology and the allied health fields; introduction to laboratory procedures and topics concerning direct and indirect patient care; tour of hospital facilities; review of current clinical practice issues. Time: one hour lecture and two-hour laboratory/discussion session per week.

MEDT 2050(1)  
Acquired Immunodeficiency Syndrome  
Fall, Spring. A comprehensive course on HIV/AIDS, discussing epidemiology, biology, socio-demography, safer sex, other sexually transmitted diseases, partner notification, ethics, testing and support services. Bowling Green faculty as well as community experts will be brought in as instructors. This course will be informative and practical.

MEDT 2220(3)  
Basic Hematology  
Study of human blood cell structure and function, methods of blood cell analysis, and changes caused by diseases. Lecture and laboratory.

MEDT 2510(2)  
Analysis of Body Fluids  

MEDT 3010(2)  
Medical Terminology  
Fall, Spring. Vocabulary and terms used by medical personnel; prefixes, suffixes, word roots and their combining forms, usage and spelling; specialized terms by body systems. Prerequisite: sophomore standing.

MEDT 3100(3)  
Forensic Laboratory Testing  
Introduction to general forensic testing as employed in clinical medicine, criminal justice, etc. Theory & demonstration include specimen collection, preservation; DNA testing; species identification, drug testing, court application, case studies. Explained in format geared to non-science majors. Lecture 2hr & 1hr discussion/demo/week. Extra fee.

MEDT 3800(2)  
AIDS Education in the Schools  
Review of current legislation, policies, procedures, educational materials and safety regarding AIDS/HIV in the classroom with emphasis on responsibilities of teachers, administrators, school board.

MEDT 4010(3)  
Issues in Health Care Administration
Capstone course examining current issues and trends affecting the health care delivery system and confronting health providers, patients and society. Interdisciplinary topics such as health care economics, quality of care, law and ethics and governmental policies will be emphasized. Prerequisite: Senior in AHS or BSBA, or junior in Medical Technology Program or consent of instructor.

MEDT 4020(1)
Orientation and Management
Orientation to hospital departments and laboratory procedures. Laboratory supervision and management. Prerequisite: admission to hospital-based medical technology program. Duration of this course may vary slightly from hospital to hospital.

MEDT 4030(9)
Applied Clinical Microbiology
Fourteen weeks of supervised practical experience in a clinical microbiology lab identifying pathogenic bacteria, fungi, and parasites. Prerequisite: admission to hospital-based medical technology program. Duration of this course may vary slightly from hospital to hospital.

MEDT 4040(2)
Clinical Serology
Three weeks of supervised experience in clinical applications of cellular and humoral immunity as diagnostic procedures. Prerequisite: admission to hospital-based medical technology program. Duration of this course may vary slightly from hospital to hospital.

MEDT 4050(5)
Applied Clinical Hematology
Eight weeks of supervised practical experience in hematologic methods, coagulation and blood cell morphology in a hospital laboratory setting. Prerequisite: admission to hospital-based medical technology program. Duration of this course may vary slightly from hospital to hospital.

MEDT 4060(11)
Applied Clinical Chemistry
Seventeen weeks of supervised practical experience in manual and automated methods in clinical chemistry, toxicology and endocrinology in a hospital setting. Prerequisite: admission to hospital-based medical technology program. Duration of this course may vary slightly from hospital to hospital.

MEDT 4070(5)
Blood Bank
Seven weeks of supervised practical experience in blood group serology with emphasis on preparation and testing of blood for transfusion in a hospital laboratory setting. Prerequisite: admission to hospital-based medical technology program. Duration of this course may vary slightly from hospital to hospital.

MEDT 4110(3)
Diagnostic Immunology I
Theory of clinical immunology related to humoral and cellular immunity in health and disease states. Prerequisite: admission to university-based medical technology program or permission of instructor.

MEDT 4120(1)
Diagnostic Immunology I Laboratory
Laboratory application and testing related to humoral and cellular immunity in disease states. Prerequisite: admission to university-based medical technology program or permission of instructor. Extra fee.

MEDT 4130(4)
Immunohematology I
Theory of human blood groups, compatibility testing, detection and identification of antibodies, blood collection/storage, management of transfusion service. Prerequisites: admission to university-based medical technology program or permission of instructor.

MEDT 4140(2)
Immunohematology I Laboratory
Laboratory application and testing of human blood groups, compatibility testing, detection and identification of antibodies. Prerequisite: admission to university-based medical technology program or permission of instructor. Extra fee.

MEDT 4150(3)
Immunohematology II
MEDT 4130 and MEDT 4140 continued; emphasis on a clinical application of current practice in Blood Banking. Prerequisites: MEDT 4130 and MEDT 4140 with a grade of C or better. Duration of this course may vary slightly from hospital to hospital. Extra fee.

MEDT 4160(2)
Clinical Immunology II
Clinical laboratory experience regarding testing and application of diagnostic immunology (MEDT 4110 and MEDT 4120). Prerequisites: grade of C or higher in MEDT 4110 and MEDT 4120 or equivalent. Duration of this course may vary slightly from hospital to hospital. Extra fee.

MEDT 4210(3)
Hematology I
Origin, regulation, morphology and function of blood cells in health and disease. Congenital and acquired hematologic aberrations. Prerequisite: admission to university-based medical technology program or permission of instructor.

MEDT 4220(2)
Hematology Lab I
Diagnostic laboratory procedures applied to qualitative and quantitative evaluation of blood cells. Prerequisite: admission to university-based medical technology program or permission of instructor. Extra fee.

MEDT 4230(2)
Hematology II
Mechanism of hemostasis in health and hemorrhagic and thrombotic disease. Blood cell morphology. Lecture and
MEDT 4240(3)
Hematology III
Continuation of Phase I hematology sequence with emphasis on clinical application and hospital laboratory instrumentation. Full-time clinical instruction and practice. Prerequisites: grade of C or better in MEDT 4210; MEDT 4220 or MEDT 4600; and MEDT 4230. Duration of this course may vary slightly from hospital to hospital. Extra fee.

MEDT 4310(3)
Clinical Bacteriology I
Isolation identification and detailed description of clinically important bacteria. Microbial etiology of disease; methods of prevention and control. Prerequisites: admission to university-based medical technology program or permission of instructor.

MEDT 4320(2)
Clinical Bacteriology I Laboratory
Diagnostic microbiology laboratory procedures. Methods of isolation and identification of clinically significant bacteria. Prerequisite: admission to university-based medical technology program or permission of instructor. Extra fee.

MEDT 4330(4)
Clinical Bacteriology II
MEDT 4310 and MEDT 4320 continued; emphasis on clinical application and identification of clinically significant bacteria. Full-time clinical instruction and practice. Prerequisites: grade of C or better in MEDT 4310, MEDT 4320, MEDT 4340 or equivalent, MEDT 4350 and MEDT 4360. Duration of this course may vary slightly from hospital to hospital. Extra fee.

MEDT 4340(3)
Clinical Parasitology
Parasitic diseases of man; methods of detection, isolation and identification of clinically significant human parasites. Lecture and lab. Prerequisite: BIOL 3130 or equivalent or permission of instructor. Extra fee.

MEDT 4350(2)
Clinical Mycology
Clinically significant fungi; methods of detection, isolation and identification. Lecture and lab. Prerequisite: BIOL 3130 or equivalent or permission of instructor. Extra fee.

MEDT 4360(1)
Clinical Virology
Study of clinically important human viruses, emphasizing structure, classification and pathogenicity. Methods of isolation, identification, prevention and vaccination will also be discussed. Prerequisite: BIOL 3130 or equivalent. Corequisites: MEDT 4310 and MEDT 4320 or permission of instructor.

MEDT 4410(4)
Clinical Chemistry I
Theoretical principles of analysis of chemical constituents of blood and body fluids in normal and disease states. Prerequisite: admission to university-based medical technology program or permission of instructor.

MEDT 4420(2)
Clinical Chemistry I Laboratory
Methods, instrumentation and techniques of clinical chemistry through experiments, problems and demonstrations. Prerequisite: admission to university-based medical technology program or permission of instructor. Extra fee.

MEDT 4430(5)
Clinical Chemistry II
Continuation of MEDT 4410 and MEDT 4420; emphasis on clinical application. Prerequisites: grade of C or better in MEDT 4410; MEDT 4420; and MEDT 4510 or MEDT 4600. Duration of this course may vary slightly from hospital to hospital. Extra fee.

MEDT 4500(3)
Emerging Infectious Diseases
Fall. Provides an overview of new and reemerging viral, bacterial and parasitic infections facing the Nation in the 21st Century. Emphasizes the clinical manifestations of these infectious diseases, global changes that contribute to emerging diseases, prevention strategies and public health's response to epidemics.

MEDT 4510(2)
Analysis of Body Fluids
Physiology of urinary system and related diseases. Methods of detection of chemical and cellular elements of urine, cerebrospinal fluid, amniotic fluid, and other body fluids. Lecture and laboratory. Prerequisite: admission to university-based medical technology program or permission of instructor. Extra fee.

MEDT 4600(1 - 3)
Medical Laboratory Technician Bridge Course
Basic theory, problem solving, troubleshooting, correlation between laboratory data and disease states, and other advanced concepts in clinical laboratory sciences. Lecture and laboratory. May be repeated. Prerequisite: Admission to professional training.

MEDT 4650(1)
Laboratory Management and Education
Laboratory supervision and management; principles of education and laboratory instruction; seminars or case histories on selected topics of clinical interest. Prerequisite: completion of pre-clinical MEDT courses or permission of instructor. Duration of this course may vary slightly from hospital to hospital.

MEDT 4700(1 - 3)
Research and Special Topics
Research techniques, literature search, experimental design, critical reading. Paper required on selected problem. Prerequisite: permission of instructor. May be repeated to 3 hours.
MEDT 4800 (1 - 3)
Introduction to Clinical Research
Research techniques, literature search, experimental design. Term paper required. For university-based
students during clinical training at clinical site. Prerequisites: completion of pre-clinical courses.
Duration of this course may vary slightly from hospital to hospital. Extra fee.

Subject: Manufacturing Technology

MFG 1260 (1)
Basic Metrology
Linear measurement instruments, gauge blocks, dial indicators, angular measurement, calibration. One hour
lecture.

MFG 2250 (3)
Plastic Materials and Processes
Identification, properties, characteristics and selection of plastic materials. Set-up and operation of
plastic processing equipment. Two hours lecture and two hours laboratory. Prerequisite: MFG 1120 or QS 2650
or permission by instructor. Offered at Firelands only.

MFG 2270 (3)
Quality Assurance
Benchmarking, advanced product quality planning, design of experiments, SPC control charting and capability
studies, pre-control charting, and measurement systems analysis. Two one-hour lectures and one two-hour
laboratory. Prerequisite: MFG 112 or QS 2650, and STAT 2000, or permission of instructor. Offered at
Firelands only.

MFG 2290 (3)
Metallic Material and Processes II
Spring. Hot metal forming and combining practices. Laboratory applications and techniques. Two one-hour
lectures and one two-hour laboratory per week. Prerequisite: MFG 112.

MFG 2400 (3)
Computer Numerical Control (CNC) Programming and Machining
Fall and on demand. Cartesian coordinate machine programming for milling and turning. CNC machining setup,
practice, and introduction to Computer-Aided Manufacturing (CAM). One two-hour lecture and one two-hour
laboratory per week. Prerequisite: MFG 2200. Extra fee.

MFG 2900 (1 - 3)
Problems in Manufacturing Technology
For advanced students wanting to conduct intensive study of selected problems in manufacturing technology.
May be repeated up to 6 hours if topics vary. Prerequisites: sophomore standing and consent of instructor.

MFG 3220 (3)
Non-Metallic Materials and Processes I
Spring. Wood, reconstructed wood and ceramic materials, processing methods and product applications. One
two-hour lecture and one two-hour laboratory. Extra fee.

MFG 4000 (3)
Materials, Properties, and Heat Treatment
Fall. Materials, mechanical properties and testing, phase diagrams, heat treatment, and metallography of
steels. Two-hour lecture and two-hour laboratory. Prerequisite: MFG 2200. Extra fee.

MFG 4240 (3)
Computer-Integrated Manufacturing Systems
Fall even years. Computer integration tools and techniques in manufacturing such as teeming, group
technology, database management. Prerequisites: MFG 2200, MFG 2400.

MFG 4280 (3)
Automation and Flexible Manufacturing Systems
Spring even years. Automation in manufacturing, including fixed automation, flexible automation based on
Computer Numerical Control (CNC) technology, and integration of these technologies into FMS. One two-hour
lecture and one two-hour laboratory. Prerequisites: MFG 2200 and MFG 2400. May be repeated. Extra fee.

MFG 4380 (3)
Metallurgy, Metallography and Heat Treating
Fall, Summer of even numbered years. Metallurgical structure and its effects on properties of ferrous and
nonferrous metals. Altering metal properties and performance through heat treating. Preparation of metals and
examination by use of metallography. One two-hour lecture and one-two hour laboratory per week.
Prerequisites: MFG 2200, MFG 2350. Extra fee.

MFG 4900 (1 - 5)
Problems in Manufacturing Technology
For advanced students wanting to conduct intensive study of selected problems in manufacturing technology.
May be repeated. Prerequisite: senior standing and consent of department. Graded S/U.

Subject: Management

MGMT 3000 (3)
Integrated Operations and Supply Chain Management
Fall, Spring, Summer. An integrated view of how supply management, operations, and logistics functions create
value for customers. Concepts studied include: design of operations and supply chain strategies, systems, and
processes; coordination and control of material and information flows; and decision-making tools for supply
chain management and integration with other business functions. Prerequisite: STAT 2120 or STAT 2200, or
equivalent.

MGMT 3040 (3)
Entrepreneurial Leadership and Teams
Theoretical foundation and application of leadership and interpersonal skills for entrepreneurial ventures.
Topics include leading, motivating, working in and with teams, coaching, mentoring, delegating, empowering
others, and goal setting. Prerequisite: BA 2040.
MGMT 3050(3)
Principles of Organization and Management
Fall, Spring, Summer. Fundamentals of organization theory; objectives, policies, decision-making, authority, management development, leadership, communication, motivation and effective human relations; management principles. No credit allowed toward BSBA degree. Prerequisite: junior standing or permission of department.

MGMT 3300(3)
Supply Management I
Fall, Spring, Summer. This course provides an overview of the supply function and explores the steps of the supply management cycle. Topics include the purchasing/procurement procedures and policy, supply organization, specifications and statement of work development, sourcing strategy, supplier evaluation, global sourcing, competitive bidding, price/cost analysis, e-procurement, and socially responsible supply management. Prerequisite: MGMT 3000 (concurrent registration in MGMT 3000 permitted).

MGMT 3600(3)
Organisational Theory and Behavior
Fall, Spring, Summer. Microrelationships in organizations; historical perspective, changing nature of organizations, and individual and overall group behavior. Specific topics include motivation, decision-making, leadership, group dynamics and organization structure. Prerequisite: STAT 2110 or STAT 2200 or equivalent.

MGMT 3610(3)
Human Resource Management
Fall, Spring, Summer. Survey of HRM activities including job analysis, performance appraisal, job evaluation, wage surveys, compensation and benefits, labor relations, health and safety, and relevant government regulations. Prerequisite: MGMT 3050 or MGMT 3600.

MGMT 4410(3)
Quality Management and Lean Tools
Fall, Spring. Fundamentals of the Six Sigma quality methodology and lean philosophies applied to the management of manufacturing and service organizations. Topics include Six Sigma, statistical process control, quality function deployment, process capability, reliability, just-in-time, and lean manufacturing. Prerequisite: C or better in MGMT 3000.

MGMT 4420(3)
Logistics Management for Supply Chains
Fall, Spring. Overview of the logistics function in a global supply chain. Topics include global supply chains, information networks and enterprise resource systems, independent demand inventory systems, transportation infrastructure and rates, warehousing, packaging, and facility location. Prerequisite: C or better in MGMT 3000.

MGMT 4450(3)
Operations Planning and Control
Fall, Spring. Topics include forecasting, sales and operation planning, master scheduling and materials requirements planning. Specific emphasis placed on the concepts of flow and capacity within operations systems and the supply chain. Prerequisite: C or better in MGMT 3000.

MGMT 4470(3)
Supply Management II
Fall, Spring. The purpose of the course is to enable students to analyze price and costs, to understand total cost of ownership models, and to plan for and conduct purchasing negotiations. Supplier relationships, contract management, and legal considerations in supply management are also covered. Prerequisite: MGMT 3300 and C or better in MGMT 3000.

MGMT 4480(3)
Advanced Supply Chain Planning
Fall, Spring. The objective of this course is to examine the complexities of process design, planning, and managing information flows in a lean supply chain. Topics include collaborative forecasting, planning, and replenishment; demand management; replanning; operations scheduling; value stream mapping; lean supply chain principles; supply chain information systems; and project management. Prerequisites: MGMT 4420, MGMT 4450, and admission to the Supply Chain Management specialization.

MGMT 4490(3)
Supply Chain Strategy
Fall, Spring. The objective of this course is to integrate principles, theories, and techniques in supply management, operations, and logistics for the effective supply chain management in a global environment. Topics include design of global supply chains, supply chain structure, and relationships with supply chain members. Prerequisites: MGMT 4410, MGMT 4470, MGMT 4480 and admission to the Supply Chain Management specialization. Concurrent registration in MGMT 4470 and MGMT 4480 permitted.

MGMT 4540(3)
Advanced Topics in Human Resources Management
Fall, Spring. Focuses on how human resource (HR) efforts help organizations select, motivate, and develop employees. Topics include employee selection, compensation, training and development, and managing organizational change. Ethics, measurement, strategic HR, and globalization will be discussed throughout the course. Prerequisite: MGMT 3610.

MGMT 4560(3)
Managing Productivity, Employee Involvement and Reward Systems
Spring. Focus on productivity improvement strategies, employee involvement, work redesign and reward and incentive systems. Prerequisite: MGMT 3050 or MGMT 3600.

MGMT 4650(3)
Managing Change in Organizations
Fall. Examination of topics related to organization development and change including diagnosing the need for change, overcoming resistance to change, implementing and evaluating interventions, and confronting the ethical dilemmas of change. Prerequisite: MGMT 3050 or MGMT 3600.

MGMT 4700(3)
Leading for Success
Fall, Spring. Uses theories, principles, and practices from organizational behavior to develop competencies for leading and managing individuals, teams and organizations; emphasizes ethical and social responsibilities; utilizes experiential learning, serves as capstone course in the Management Specialization. Prerequisites: admission to specialization and MGMT 3610, MGMT 4540, and MGMT 4650. Concurrent registration in MGMT 4540 permitted.

MGMT 4910(1 - 3)
Studies in Management
On demand. Selected areas not covered by existing courses but which are developing rapidly as important parts of discipline. Offered to individual on lecture basis or in seminar, depending on student need and course content. May be repeated to six hours.

Subject: Management Information Systems
MIS 2000(3)
Introduction to Management Information Systems
Fall, Spring, Summer. Principles of computer-based information systems; role of information systems in business organizations; database software to manage information; spreadsheet software in decision-making. Prerequisite: Pass a proficiency test in basic spreadsheet skills. Extra fee.

MIS 4020(3)
Windows Application Design
Design of business applications in Windows environment. Focus on developing database front-ends and integration of spreadsheets, databases, and other productivity applications. Visual programming languages such as Visual Basic used as development environment. Prerequisites: MIS 2000 and CS 2010.

MIS 4050(3)
Electronic Commerce
Management strategies, challenges and issues in the domain of electronic commerce. Impact on global competition and society. Role of Internet-based technologies in accelerating electronic commerce. New business opportunities and skills needed to exploit them. Prerequisite: MIS 2000 or CS 1000 or approval of department. Extra fee.

MIS 4170(3)
Microcomputer Hardware and Software Management
Management of the microcomputer environment. Issues in distributed computing systems. Emphasis on microcomputer architecture and operating systems. Understanding of components in microcomputer systems and their implications. Prerequisite: MIS 2000 or approval of department.

MIS 4210(3)
Business Data Communication and Distributed Processing
Basic concepts, security, and design of business data communication systems and distributed processing of business information systems. Prerequisite: MIS 2000.

MIS 4220(3)
Information Systems Security
The course covers a broad range of technical security threats and security management issues. Topics include current risks and threats to an organization's network and data as well as security technologies and concepts. Prerequisite: MIS 4210 or permission of instructor.

MIS 4400(3)
Database Management
Logical database design and effective implementation, including hierarchical, network and relational models. Prerequisites: MIS 2000 and CS 2010.

MIS 4500(3)
Business Process Management with SAP
Business processes and integration of business processes to achieve business goals. This course will use SAP software product as a tool to illustrate business process integration. Prerequisites: MIS 2000 and ACCT 2210.

MIS 4710(3)
Systems Analysis and Design
Concepts and methods of systems analysis and design; includes a project involving design of a computer-based information system. Prerequisite: MIS 4400.

MIS 4720(3)
Information Systems Project Management
Planning, organizing, executing, and controlling information system projects. Estimating information system project efforts. Management of special projects such as outsourcing and ERP systems. Management of risks. Prerequisite: MIS 4400.

MIS 4890(1 - 3)
Internship Seminar
To be completed at first opportunity following suitable internship experience. Work experience to be preceded by at least 70 hours of academic credit. No credit for students with other internship credit in College of Business Administration. No credit toward the MIS specialization within the BSBA program or the MIS minor. Graded S/U.

MIS 4910(1 - 3)
Studies in Management Information Systems
On demand. Selected areas or contemporary problems. May be repeated to six hours. May be offered individually as well as in classes, depending upon student needs and nature of material. Prerequisite: approval of department.

Subject: Marketing
MKT 3000(3)
Principles of Marketing for Non-Business Majors
Fall, Spring, Summer. Introduction to marketing activities and decisions for non-business students. Topics include: product, price, promotion, distribution activities; market segmentation; buyer behavior; marketing
MKT 3010(3)
Introduction to Marketing Management
Fall, Spring, Summer. A strong foundation in the marketing process, including a definition, the principles, and an exploration of strategies. How the marketing of goods and/or services serves the mission and fits into the larger strategic, business, operational and budget plans and goals of an organization. Specific topics include branding, market research, buyer behavior, segmentation, advertising, selling, distribution and pricing. Designed for BSBA students. Prerequisite: ECON 2020 and ACCT 2210.

MKT 3020(3)
Consumer Behavior
Fall, Spring. Pertinent theoretical and empirical findings about consumer markets and behavior, implications for marketing practice. Topics include: processes of decision making and evaluation; personal, social, environmental, and marketing influences; attitude formation and change; information processing and learning; segmentation of markets. Prerequisite: C or better in MKT 3000 or MKT 3010.

MKT 3200(3)
Marketing Research
Fall, Spring. Research as a process and source of information for marketing decision making. Examines research methods and techniques used in the collection, analysis, and interpretation of primary and secondary data for consumer and business marketing. Prerequisites: C or better in STAT 2120 or STAT 2200 or equivalent, and C or better in MKT 3000 or MKT 3010.

MKT 3500(3)
Business-to-Business Marketing
Fall, Spring. Marketing to organizations (business, institutions, government). Topics include organizational buying and behavior, market forecasting, segmentation and competitive assessment, business marketing partnerships, distribution channel management and products, services, pricing, promotions for organizational markets. Prerequisite: C or better in MKT 3000 or MKT 3010.

MKT 4000(1 - 3)
Topics in Marketing
On demand. Selected areas not covered in depth by existing courses but which are developing as an important part of marketing. Offered on lecture basis or in seminar, depending on student demand and course content. Typical topics, which may vary from semester to semester, could include nonprofit marketing; demand analysis and forecasting; distribution systems; or pricing strategies. May be repeated to 6 hours. Prerequisites: depending upon course content, prerequisites in addition to C or better in MKT 3000 or MKT 3010 may be required.

MKT 4050(3)
Services Marketing
Fall, Spring. Conceptual and analytic framework for the application of marketing principles to the service sector of the economy. Development and understanding of the impact of unique service characteristics on the development of marketing strategies. Prerequisite: C or better in MKT 3000 or MKT 3010.

MKT 4080(3)
Introduction to Promotion
Fall, Spring. An exploration of the role of promotion in the marketing process. Topics include: buyer behavior, information processing, communications, and the promotional elements. Strategy implications are stressed throughout the course. Non-Marketing students only. Credit not applicable to specialization in Marketing in BSBA. Credit not allowed for both MKT 4080 and MKT 4100. Prerequisite: C or better in MKT 3000.

MKT 4100(3)
Marketing Communication and Promotion
Fall, Spring. Role of promotion in marketing process. Applications of consumer behavior theory to promotional mix (advertising, personal selling, sales promotion, public relations) and other marketing communications. Topics include integrated marketing communications, communication theory, promotional planning, creation, execution and evaluation. Prerequisite: C or better in MKT 3020.

MKT 4120(3)
Advertising Management
Fall or Spring. Role of advertising management in the marketing mix and advertising as component of integrated marketing communications. Topics include objective setting, market positioning, campaign strategy and tactics (creative and media), campaign effectiveness. Term project usually used. Prerequisite: C or better in MKT 4080 or MKT 4100.

MKT 4150(3)
Managing the Service Experience
Fall, Spring. Explores the unique problems and issues that occur within service firms as they attempt to develop effective service marketing strategies and manage the service encounter. Topics include: internal marketing; service provider roles; service failure and recovery strategies; management of service quality; server provider management. Prerequisite: C or better in MKT 4050 and MKT 3000 or MKT 3010.

MKT 4160(3)
Servicescape Design
Fall, Spring. Explores the unique managerial problems and decisions that occur within a service encounter due to the interaction of people (provider and client) and their physical environment. Covers four basic areas of the elements of physical evidence: exterior, interior, support materials and people. Prerequisite: C or better in MKT 3000 or MKT 3010. Recommended: MKT 4050.

MKT 4210(3)
Advanced Marketing Research
On demand. Application of research methods and techniques to solve marketing problems. Research design, implementation, interpretation of results, reporting. Topics include: advanced study of sampling; questionnaire design; data collection and retrieval; data analysis; presentation of results. Prerequisite: C or better in MKT 3200.

MKT 4250(3)
Creativity in Marketing
Fall, Spring. An exploration of the role of creative expression in marketing thought and practice. Topics include: individual and group creativity, the creative problem-solving process, creativity assessment, idea generation theory, the application of problem-solving frameworks to the development of creative marketing strategy. Prerequisite: C or better in MKT 3000 or MKT 3010.

MKT 4300(3) Retail Management
Fall or Spring. Retailing is the study of companies involved in and the process of selling products to final consumer. Topics include: store location and trade area analysis; retail financial control; inventory planning; buying; merchandising; store layout; retail promotion. Prerequisite: C or better in MKT 3000 or MKT 3010. Recommended: ACCT 2000 or ACCT 2210.

MKT 4350(3) Marketing on the Internet
Fall, Spring. Application of basic principles associated with marketing goods and services on the Internet. Emphasis on the dynamic way in which the Internet impacts all elements of an organization's marketing strategy, including advertising, selling, distribution, pricing, and the product itself. Prerequisite: C or better in MKT 3000.

MKT 4400(3) Professional Selling
Fall, Spring. The selling process is studied from a theory, techniques and application perspective. Topics include: behavioral aspects of sales; prospecting; qualifying; approaching; presenting; handling objections; closing; follow-up; and other special interest topics. Sales presentation is required for all students. Prerequisite: C or better in MKT 3000 or MKT 3010.

MKT 4420(3) Sales Management
Fall or Spring. Theory, principles and practices of selling and sales force administration for manufacturing and wholesaling enterprises. Topics include: recruiting; training; compensation; sales force size and design; selling techniques; performance appraisal. Prerequisite: C or better in MKT 3000 or MKT 3010.

MKT 4450(3) Product Planning
On demand. Issues and concepts related to planning, development, management and analysis of products. Emphasis on role of new products in corporate strategy; process, organization, research and oversight of new product development and management of existing products. Prerequisite: C or better in MKT 3000 or MKT 3010.

MKT 4550(3) International Marketing
Fall or Spring. Theory and practice of marketing across national borders, as well as marketing within different foreign environments, highlighting the similarities and differences among various countries and regions. Special attention to the marketing structure and strategies of global corporations. Prerequisite: C or better in MKT 3000 or MKT 3010.

MKT 4600(3) Marketing Management
Fall, Spring. Capstone course in planning, integration, management of marketing functions. Customer analysis and segmentation; competitive analysis; design and management of pricing, product, distribution, promotion activities; tactical and strategic marketing decisions. Prerequisites: C or better in each of MKT 3020, MKT 3200 and admission to the BSBA program.

MKT 4890(1 - 3) Marketing Internship
Fall, Spring. Work in approved business position; credit determined by quality and extent of work experience. Not open to freshmen and sophomores. No credit for students with credit for ACCT 4890, BA 4890, MGMT 4890 or MIS 4890. Prerequisites: six hours of MKT coursework and permission of department. Graded S/U.

MKT 4910(1 - 3) Special Studies in Marketing
Fall, Spring. Independent or small group study of selected topics not covered by existing courses but which are currently (or becoming) an important part of marketing. Prerequisite: permission of department chair. Graded S/U.

Subject: Military Science & Leadership
MSL 1000(2)
Lifetime Leadership Skills
Skills needed to be successful in wide range of environments to include academic, corporate and military. Subjects include but not limited to time management, memory comprehension, effective and efficient reading and effective note taking. Extensive leadership studies of both corporate and military settings focuses on interpersonal skills, professional ethics and officership. No military obligation or prerequisites. Extra fee.

MSL 1010(2)
ROTC and the National Defense Organization
Background, programs, benefits and objectives of Army ROTC. Organization and functions of national defense establishment, with emphasis on the role of the U.S. Army. Extensive discussion of the role and responsibility of the military officer. Presentation of detailed information concerning career opportunities as an Army officer. Extra fee.

MSL 2010(2)
Leadership/Offership
Theoretical and practical leadership instruction. Examination of several aspects of communication and leadership concepts such as written and oral communication, effective listening, assertiveness, personality, adult development, motivation, and organizational culture and change. Emphasis on developing intellectual curiosity and clarifying practical applications. No military obligation. Prerequisite: MSL 1010 or permission of department. Extra fee.
MSL 2020 (2)
**Military Tactics**
Army tactics, principles of engagement and usage of military maps. Simulation exercises and war games will be utilized in class highlighting military tactics. No military obligation. Prerequisite: MSL 2010 or permission of department. Extra fee.

MSL 3010 (3)
**Professionalism/Leadership**
Professionalism and leadership required of the U.S. Army Officer; application of leadership principles and styles through case studies and role-playing exercises with emphasis on military situations. Participation in leadership labs, physical training program and field training exercises required. Prerequisites: department permission and completion of one of the following: ROTC basic course at BGSU; ROTC Basic Camp at Fort Knox, KY; prior active duty service; Army Reserve or Army National Guard basic training. Extra fee.

MSL 3020 (3)
**Small Unit Operations**
Organization and employment of basic military teams. Squad- and platoon-level tactical operations. Progressive leadership development through application of tactical principles. Participation in leadership labs, physical training program and field training exercises required. Prerequisite: department permission. Extra fee.

MSL 4010 (3)
**Unit Management and Officer Development**
Concepts and fundamentals of Army unit administration, supply and material readiness. Professional officership techniques and military ethics. Management at the small unit level. Organizing, planning and participating in field training exercises, participation in physical training and leadership labs. Prerequisite: department permission. Extra fee.

MSL 4020 (3)
**Military Law and Leadership**
Organization and concepts of the U.S. Army judicial system including court martial, non-judicial and punitive actions. Fundamentals of the military decision making process. Discussions of various administrative details pertinent to newly commissioned lieutenants. Participation in field training exercises, physical training and leadership labs. Prerequisite: department permission. Extra fee.

MSL 4700 (1 - 3)
**Studies in Military Science**
On demand. Detailed study of selected military subjects. Offered on lecture basis in seminar or independent study depending on students' needs and nature of material. May be repeated to six hours. Prerequisite: consent of instructor. Extra fee.

**Subject: Musicology/Composition/Theory**

**MUCT 1010 (2)**
**Exploring Music**
Fall, Spring, Summer. Focus on three types of contexts important to appreciating music: the composer, the place and the time. Not open to bachelor of music degree students. Applicable to the BG Perspective (general education) humanities and arts requirement.

**MUCT 1100 (3)**
**Elements of Music**
Designed to lead students to a mastery of rudiments of written theory and to provide introductory work in the development of related listening skills.

**MUCT 1110 (2)**
**Basic Musicianship I**
Fall, Summer. Thorough study of music fundamentals; basic ear training and sight singing; introduction to diatonic harmony and melodic organization, with examples from a variety of music literature. Open only to music majors and minors with low scores on placement exam.

**MUCT 1140 (2)**
**Basic Musicianship II**
Spring. MUCT 1130 continued. Prerequisite: MUCT 1130.

**MUCT 1150 (1)**
**Accelerated Fundamentals of Music**
Fall (first eight weeks). Intense study of reading and writing music notation for scales, keys, intervals, triads, rhythm and meter. Open only to music majors and minors. Prerequisite: middle score on placement exam. Should be taken concurrently with MUCT 1410 and MUCT 1510.

**MUCT 1160 (2)**
**Fundamentals of Composition**
Fall, Spring. Basic compositional techniques for students not yet admitted to baccalaureate program in music composition. May be repeated.

**MUCT 1250 (3)**
**Music of World Cultures**
Fall, Spring, Summer. Musical systems of major non-Western art musics: Africa, Near East, Pacific and Asia. Theoretical, analytical and cultural concepts related to music. Not open to bachelor of music degree students, except for those in the world music program. Applicable to the BG Perspective (general education) humanities and arts and international perspective requirements.

**MUCT 1410 (2)**
**Aural Skills I**
Fall, Spring, Summer. Basic skills in sighthsinging; rhythmic, melodic and harmonic dictation of diatonic and triadic materials. Prerequisite: middle or high score on placement exam or MUCT 1100 or MUCT 1140. Should be taken concurrently with MUCT 1510.

**MUCT 1420 (2)**
**Aural Skills II**
Fall, Spring, Summer. Sightsinging and dictation of more difficult diatonic and triadic materials. Prerequisite: MUCT 1410 and for those with a middle score on the placement exam, MUCT 1150. Should be taken concurrently with MUCT 1520.

**MUCT 1510(2)**
**Theory I**
Fall. Knowledge and skills in diatonic harmony, melodic organization, form-creating aspects, with examples from a variety of music literature. Prerequisite: middle or high score on placement exam. Should be taken concurrently with MUCT 1410 and, for those with middle score on placement exam, MUCT 1150.

**MUCT 1520(2)**
**Theory II**
Spring. Knowledge and skills in diatonic and chromatic harmony, melodic organization, part forms, with examples from a variety of music literature. Prerequisite: MUCT 1510. Should be taken concurrently with MUCT 1420.

**MUCT 2100(2)**
**Jazz Aural Skills**
Spring alternate years. Development of skills in recognition, dictation and singing of harmonic and melodic material characteristic of the jazz idiom. Familiarity with jazz nomenclature recommended. Open to nonmajors, minors and music majors. Prerequisite: MUCT 2410 or permission of instructor.

**MUCT 2160(1 - 4)**
**Composition**
Fall, Spring. Private composition lessons for freshmen and sophomores. May be repeated. Limited enrollment course, with registration priority given to composition majors. Others accommodated on a space-available basis by audition.

**MUCT 2210(2)**
**Masterpieces of Music**
Fall, Spring. Music of important composers from various periods; directed listening of selected works. Not open to Bachelor of music degree students. Applicable to the BG Perspective (general education) humanities and arts requirement.

**MUCT 2330(2)**
**Music in African Culture**
Spring even years. The study of music in various groups of sub-Saharan Africa with emphasis on its relation to individual cultures, its structure and performance. Applicable to the BG Perspective (general education) humanities and arts and international perspective requirements.

**MUCT 2340(2)**
**Music in Japanese Culture**
Spring odd years. The study of music in Japanese religious ritual, historical court and popular settings, and music for theater and concert, with emphasis on its socio-historical context. Applicable to the BG Perspective (general education) humanities and arts and international perspective requirements.

**MUCT 2350(2)**
**Music in Indonesian Culture**
Fall. The study of music in Indonesia, particularly in Bali and Java, with emphasis on its historical and cultural context. Applicable to the BG Perspective (general education) humanities and arts and international perspective requirements.

**MUCT 2370(3)**
**Jazz**
Spring. The music of various styles of jazz from around 1900 to the present. Theoretical, analytical, cultural and performance concepts will be related to the music. Applicable to the BG Perspective (general education) cultural diversity in the United States requirement.

**MUCT 2410(2)**
**Aural Skills III**
Fall, Spring, Summer. Intermediate skills in sightsinging; rhythmic, melodic and harmonic dictation of chromatic material including seventh chords. Should be taken concurrently with MUCT 2510. Prerequisite: MUCT 1420.

**MUCT 2420(2)**
**Aural Skills IV**
Fall, Spring, Summer. Sightsinging and dictation of highly chromatic and twentieth-century materials. Should be taken concurrently with MUCT 2520. Prerequisite: MUCT 2410.

**MUCT 2510(2)**
**Theory III**
Fall. Knowledge and skills in chromatic harmony, counterpoint and large-scale forms (sonata, rondo, etc.) with examples from a variety of music literature. Prerequisite: MUCT 1520. Should be taken concurrently with MUCT 2410.

**MUCT 2520(2)**
**Theory IV**
Spring. Twentieth-century techniques and styles. Prerequisite: MUCT 2510. Should be taken concurrently with MUCT 2420.

**MUCT 2610(3)**
**Music History I**
Fall. Study of the history, social setting and style of Western art music in the Medieval, Renaissance and Baroque periods (ca. 800-1750). Prerequisite: MUCT 1520.

**MUCT 2620(2)**
**Music History II**
Spring. Study of the history, social setting and style of Western art music in the Classical and Romantic periods (ca. 1730-1900). Prerequisites: MUCT 2510, MUCT 2610.
MUCT 3080(2)  
Keyboard Harmony I  
Fall even years. Use of keyboard skills related to score reading, transposition, extemporization and accompanying.

MUCT 3090(2)  
Keyboard Harmony II  
Spring odd years. Continuation of keyboard skills developed in MUCT 3080. Prerequisite: MUCT 3080.

MUCT 3150(2)  
Orchestration  
Fall. Score analysis; arranging and/or composing for various families of orchestra (woodwinds, brass, percussion, strings) and scoring for full symphonic orchestra. Prerequisite: MUCT 2510.

MUCT 3200(2)  
Band Scoring  
Fall, Spring. Scoring for band instruments, from small ensembles to concert band. Prerequisite: MUCT 2510.

MUCT 3250(2)  
Choral Arranging  
Spring. Text analysis; arranging for men's, treble, and mixed voices; A Cappella and accompanied ensemble arranging techniques. Prerequisite: MUCT 2510.

MUCT 3450(3)  
Survey of Music Technology  
Spring. Overview of music technology; use of computers in music (yesterday, today and tomorrow). Philosophical implications of technology and musical expression. Literature of music technology in pop, jazz and the avant-garde. No prerequisites.

MUCT 3610(2)  
Music History III  
Fall. Study of the history, social setting and style of Western art music in the twentieth century. Prerequisites: MUCT 2520, MUCT 2620.

MUCT 3950(1 - 4)  
Workshop on Current Topics  
Fall, Spring, Summer. Intensive educational experience on selected topics in music related to skill development, content update or materials development. Prerequisite: As announced for each workshop. May be repeated on approval of adviser.

MUCT 4030(2)  
Counterpoint I  
Fall odd years. 16th-century counterpoint. Prerequisites: MUCT 2510, MUCT 2610.

MUCT 4040(2)  
Counterpoint II  
Spring even years. 18th-century counterpoint: tonal counterpoint in three and four voices; canon, invention, fugue, chorale-prelude. Prerequisites: MUCT 2510, MUCT 2610.

MUCT 4060(3)  
Problems in Music History  
Fall, Spring. Research of topics and problems in music history. Prerequisite: consent of instructor. May be repeated to 12 hours.

MUCT 4070(2)  
Performance Practice  
Fall even years. Performance practice in music, improvisation, ornamentation, accompaniment, instrumentation, rhythm and tempo. Prerequisite: MUCT 2620.

MUCT 4080(2)  
Chamber Music Literature  
Fall odd years. Study of selected major chamber works of various periods. Prerequisite: MUCT 2620.

MUCT 4090(2)  
Symphonic Literature  
Fall even years. Study of major symphonic works from 1750 to modern period. Prerequisites: MUCT 2520, MUCT 2620.

MUCT 4100(2)  
Contemporary Music Pro-Seminar  
Fall. Musical styles and techniques of 20th century. Compositional and analytical approach, considering various influences of past. May be repeated to eight hours. Prerequisite: MUCT 3610.

MUCT 4120(2)  
Opera Literature  
Fall odd years. Study of major operatic works of various periods. Prerequisite: MUCT 2620.

MUCT 4160(1 - 4)  
Composition  
Fall, Spring. Private composition lessons for juniors and seniors. May be repeated. Limited enrollment course, with registration priority given to composition majors. Others accommodated on a space-available basis by audition.

MUCT 4200(2)  
Introduction to Ethnomusicology  
Spring even years. Topics and techniques in ethnomusicology. Open to students interested in all music as aspects of culture.

MUCT 4210E(1)  
Afro-Caribbean Ensemble
Fall, Spring. Elective (small) ensemble. May be repeated.

**MUCT 4220E(1)**  
Balinese Gamelan  
Fall, Spring. Elective (small) ensemble. May be repeated.

**MUCT 4230E(1)**  
Early Music Ensemble (Instrumental)  
Fall, Spring. Elective (small) ensemble. May be repeated.

**MUCT 4240E(1)**  
Early Music Ensemble (Vocal)  
Fall, Spring. Elective (small) ensemble. May be repeated.

**MUCT 4250E(1)**  
New Music Ensemble  
Fall, Spring. Elective (small) ensemble. May be repeated.

**MUCT 4310(3)**  
Aesthetics of Black Music  
Spring. West African and African-American concepts of music; modifications and innovations in America from slavery to present. Applicable to the BG Perspective (general education) cultural diversity in the United States requirement.

**MUCT 4360(2)**  
Audio Recording Techniques  
Fall, Spring. Concert and studio multi-track recording methods culminating with an actual recording session. Students will gain some hands-on experience. Extra fee.

**MUCT 4370(2)**  
Advanced Recording Techniques  
Spring. Advanced studio multi-track techniques and stereo concert hall recording. Emphasis placed on applied recording techniques, in-depth understanding of peripheral hardware and microphone choice and placement. Prerequisite: MUCT 4360. Extra fee.

**MUCT 4440(3)**  
Music Technology I  
Fall. Introduction to the principles and techniques of music technology and electroacoustic music. Includes hands-on investigation of course techniques and principles in a studio setting. Course materials are practiced during individual studio lab times. Prerequisites: None. Extra fee.

**MUCT 4450(3)**  
Music Technology II  
Spring. Continuation of study into the principles and techniques of music technology and electroacoustic music. Course materials are practiced during individual studio lab times. Prerequisite: MUCT 4440 or consent of instructor. Extra fee.

**MUCT 4460(3)**  
Music Technology III  
Fall. Advanced concepts related to principles and techniques of music technology and electroacoustic music. Emphasis on music programming languages. Course materials are practiced during individual studio lab times and tutorial session. Prerequisite: MUCT 4450 or consent of instructor. Extra fee.

**MUCT 4470(3)**  
Music Technology IV  
Spring. Continuation of advanced concepts related to principles of music technology and electroacoustic music. Emphasis on music programming languages. Course materials are practiced during individual studio lab times and tutorial sessions. Prerequisite: MUCT 4460 or consent of instructor. Extra fee.

**MUCT 4700(2 - 4)**  
Reading and Research  
Fall, Spring. Directed independent reading and research in history, philosophy, theory or aesthetics of music. Prerequisites: 16 hours of music theory and history, and consent of instructor. May be repeated.

**Subject: Music Education**

**MUED 1250(1)**  
Percussion Class  
Fall, Spring. Prerequisite: MUED 1450. (Elective).

**MUED 1300(1)**  
Trumpet-French Horn Class  
Fall, Spring, Alternate summers.

**MUED 1360(1)**  
Trombone-Euphonium-Tuba Class  
Fall, Spring, Alternate summers.

**MUED 1400(1)**  
Clarinet-Saxophone Class  
Fall, Spring, Alternate summers.

**MUED 1450(1)**  
Flute-Percussion Class  
Fall, Spring.

**MUED 1460(1)**  
Oboe-Bassoon Class  
Fall, Spring, Alternate summers.
MUED 1470(1)
Bassoon Reed Class
Spring. [Elective].

MUED 1500(1)
Class Piano
Fall, Spring. Class piano instruction for beginners and those with minimal keyboard experience. Placement into MUED 1500 and MUED 1510 is determined on the basis of an audition. Only open for credit to music majors and minors. Grade of C or better required for admittance into MUED 1510. Extra fee.

MUED 1510(1)
Class Piano
Fall, Spring. MUED 1500 continued. Grade of C or better required for admittance into sophomore-level group piano courses. This course includes Piano Proficiency I. Extra fee.

MUED 1540(1)
Class Piano
Fall, Spring. Intermediate class study. A more advanced approach to the acquisition of functional skills for those with advanced keyboard facility who need class instruction in order to pass functional proficiency requirements. A grade of C or better required for admittance into sophomore-level group piano courses; includes Piano Proficiency I. Extra fee.

MUED 1560(2)
Beginning Piano for the Non-music Major I
Fall, Spring. Class piano course for beginning work in music reading, pop/jazz chords, keyboard technique, improvisation and elementary piano literature. Not open to music majors or minors. Extra fee.

MUED 1570(2)
Beginning Piano for the Non-music Major II
Spring. MUED 1560 continued. Class piano course for beginning work in music reading, pop/jazz chords, keyboard technique, improvisation and easy piano literature. Not open to music majors or minors. Prerequisite: MUED 1560 or equivalent. Extra fee.

MUED 1700(1)
Voice Class
Fall, Spring. Beginning study of voice production, breathing, posture and diction through vocalises and songs in English. Only open to music majors and minors.

MUED 1800(2)
String Class
Fall, Spring.

MUED 1950(1)
Guitar Class
Fall, Spring. (MUED majors and minors only.)

MUED 2220(2)
Global Music Traditions
Fall. Study samples of music outside of the Western-art tradition. Examine various cultural values, practices, contexts, and methods of transmission in relation to the musical traditions. Identify resources and materials for further study or application. Prerequisite: MUCT 1140 or equivalent. Applicable to the B.G Perspective (general education) humanities and arts and international perspective requirements.

MUED 2400(3)
Introductory Music Field Experience
Fall. Spring. Introduction to the music education profession and a wide variety of teaching situations at all levels. Prerequisites: sophomore standing in music; GPA of 2.5, grade of C or above in each course with a MUED prefix, and satisfactory progress in all Music Core courses taken prior to MUED 2400. C/F hrs.: 24. Required of all sophomores.

MUED 2450(2)
Music Teaching Skills for the Middle Childhood Teacher
Fall, Spring, Summer. Development of skills for planning and implementing children's musical experiences with emphasis on middle childhood grades (4-9); focus on thematic integration with other subject areas. C/F hrs.: 20. Prerequisites: GSW 1120, EDHD 2010, sophomore standing.

MUED 2460(2)
Music Education for Early Childhood
Fall, Spring, Summer. Understand the elements of music through conceptual learning; create, plan, and evaluate developmentally and musically appropriate programs for children (0-8 years). C/F hrs.: 20. Prerequisites: GSW 1120, EDHD 2010, sophomore standing.

MUED 2500(2)
Class Piano: Instrumental Harmonization and Score Reading (Proficiency II)
Fall, Spring. Course for intermediate-level work in melody harmonization, transposition, and sight-reading of piano, choral and instrumental scores. Prerequisite: Piano Proficiency I. Grade of C or better required for admittance into next course. Extra fee.

MUED 2510(1)
Class Piano: Instrumental Harmonization and Score Reading II
Fall. Class piano course for students with advanced keyboard facility; intermediate-level work in melody harmonization, pop/jazz chords and sight-reading of piano and instrumental scores. Prerequisite: Piano Proficiency I. Grade of C or better required for admittance into accompanying course. Extra fee.

MUED 2520(2)
Class Piano: Choral Harmonization and Score Reading I
Fall, Spring. Class piano course for intermediate-level work in melody harmonization, pop/jazz chords and sight-reading of choral scores. Prerequisite: Piano Proficiency I. Grade of C or better required for admittance into accompanying course. Extra fee.
MUED 2560(1)
Class Piano: Accompanying as a Teaching Tool I
Fall, Spring. Class piano course for music education students who are not advanced pianists; provides introductory work in accompanying skills. Prerequisite: Piano Proficiency II. Grade of C or better required of music education majors for graduation. Extra fee.

MUED 2570(2)
Class Piano: Advanced Harmonization, Score Reading and Accompanying (Proficiency II and III)
Fall, Spring. Course for students with advanced keyboard facility; intermediate-level melody harmonization, accompanying and sight-reading of piano, choral and instrumental scores. Prerequisite: Piano Proficiency I. Grade of C or better required of music education majors for graduation. Extra fee.

MUED 3400(2)
Elementary Music Methods
Fall, Spring. Concentrated study of organization, administration and teaching of general music in the elementary grades; emphasizes correlation of methods seminars with clinical and field activities. C=10 hours. Prerequisites: MUED 2400, GPA of 2.5, grade of "C" or better in each course with a MUED prefix, satisfactory progress in all MUCT courses taken prior to enrollment, pass Piano Proficiency I, instrumental majors must have successfully completed two techniques classes and the voice class with a grade of "C" or better.

MUED 3410(3)
General Junior High Methods
Fall, Spring. Concentrated study of organization, administration and teaching of general music in middle school/junior high and secondary grades; emphasizes correlation of methods seminars with clinical and field activities. C=10 hours. Prerequisites: MUED 2400, GPA of 2.5, grade of "C" or better in each course with a MUED prefix, satisfactory progress in all MUCT courses taken prior to enrollment, pass Piano Proficiency I, instrumental majors must have successfully completed two techniques classes and the voice class with a grade of "C" or better.

MUED 3420(2)
Band/Orchestra Methods
Fall, Spring. Concentrated study of organization, administration and teaching of band and orchestra music in the public schools; emphasizes correlation of methods seminars with clinical and field activities. To be taken with MUED 3430. Prerequisites: MUED 2400, GPA of 2.5, grade of "C" or better in each course with a MUED prefix, satisfactory progress in all MUCT courses taken prior to enrollment, pass Piano Proficiency I, instrumental majors must have successfully completed two techniques classes and the voice class with a grade of "C" or better.

MUED 3430(2)
Band Field Experience
Fall, Spring. Field component of MUED 3420. Fall semester—students are assigned to the University Cooperative schools, M/W mornings. Spring semester: Option 1, assigned to the University Cooperative schools, M/W mornings and area schools, serveral mornings, Fridays. Includes observation and teaching. To be taken with MUED 3420. Spring students must meet with the music education adviser for placement selection during the preceding Fall semester. F=minimum 48 hours. Prerequisites: MUED 2400 and all other prerequisites as listed for MUED 3420. Graded S/U.

MUED 3440(2)
Choral Methods
Fall. Concentrated study of organization, administration and teaching of choral music in the public schools; emphasizes correlation of methods seminars with clinical and field activities. To be taken with MUED 3450. Prerequisites: MUED 2400, GPA of 2.5, grade of "C" or better in each course with a MUED prefix, satisfactory progress in all MUCT courses taken prior to enrollment, pass Piano Proficiency I, instrumental majors must have successfully completed two techniques classes and the voice class with a grade of "C" or better.

MUED 3450(2)
Choral Field Experience
Fall. Field component of MUED 3440. Students are assigned to the University Lab schools and/or area schools. Includes observation and teaching. To be taken with MUED 3440. F=minimum 48 hours. Prerequisites: MUED 2400, GPA of 2.5, grade of "C" or better in each course with a MUED prefix, satisfactory progress in all MUCT courses taken prior to enrollment, pass Piano Proficiency I, instrumental majors must have successfully completed two techniques classes and the voice class with a grade of "C" or better. Graded S/U.

MUED 3460(2)
Classroom Methods
Spring. Concentrated study of organization, administration and teaching of classroom/general music in the public schools; emphasizes correlation of methods seminars with clinical and field activities. Prerequisites: MUED 2400, GPA of 2.5, grade of "C" or better in each course with a MUED prefix, satisfactory progress in all MUCT courses taken prior to enrollment, pass Piano Proficiency I, instrumental majors must have successfully completed two techniques classes and the voice class with a grade of "C" or better.

MUED 3470(2)
Classroom Field Experience
Spring. Field component of MUED 3460. Students are assigned to the University Lab schools and/or area schools. Includes observation and teaching. F=minimum 48 hours. Prerequisites: MUED 2400, GPA of 2.5, grade of "C" or better in each course with a MUED prefix, satisfactory progress in all MUCT courses taken prior to enrollment, pass Piano Proficiency I, instrumental majors must have successfully completed two techniques classes and the voice class with a grade of "C" or better. Graded S/U.

MUED 3480(2)
Orchestra/Band Methods
Fall. Concentrated study of organization and administration of orchestra and band programs and teaching of orchestra and band music in public and private school settings; emphasizes correlation of methods seminars with clinical and field activities. Prerequisites: MUED 2400, GPA of 2.5, grade of "C" or better in each course with a MUED prefix, satisfactory progress in all MUCT courses taken prior to enrollment, pass Piano Proficiency I, instrumental majors must have successfully completed two techniques classes and the voice class with a grade of "C" or better.
MUED 3490(1 - 2)  
Orchestra/Band Field Experience  
Fall. Field component of MUED 3480. Students are assigned to area schools for observation and teaching experience. Prerequisites: MUED 2400, GPA of 2.5, grade of “C” or better in each course with a MUED prefix, satisfactory progress in all MUCT courses taken prior to enrollment, pass Piano Proficiency I, instrumental majors must have successfully completed two techniques classes and the voice class with a grade of "C" or better. Graded S/U.

MUED 3500(2)  
Choral Methods for Instrumental and Classroom Music Education Majors  
Fall, Spring. Study of choral methods and repertoire that will provide students with the tools necessary for building and maintaining successful choral programs in elementary, middle, and secondary schools. Prerequisites: MUED 2400, GPA of 2.5, grade of “C” or better in each course with a MUED prefix, satisfactory progress in all MUCT courses taken prior to enrollment, pass Piano Proficiency I, instrumental majors must have successfully completed two techniques classes and the voice class with a grade of "C" or better.

MUED 3950(1 - 4)  
Workshop on Current Topics  
On demand. Intensive educational experience on selected topics related to skill development, content update or materials development. Typically, an all day or similar concentrated time format used. Requirements usually met within time format. May be repeated.

MUED 4020(1)  
Beginning Wind and Percussion Instrument Repair  
Spring. Basic practices and techniques of instrument repair. Extra fee.

MUED 4510(2)  
Advanced Methods Classroom Music  
Fall. Examination of methods, instructional hardware, organizational patterns and curricular models. Available for graduate credit also. Prerequisite: MUED 3400 or consent of instructor. Should be completed prior to student teaching. C=10 hours.

MUED 4580(2)  
Marching Band Techniques  
Spring. Techniques in planning, charting and rehearsing marching band shows and administering public school marching bands. Prerequisite: junior standing.

MUED 4590(2)  
Examination and Performance of Choral Repertoire  
Spring. Material suitable for use in secondary schools; related performance practices and their solutions. C=5 hours.

MUED 4600(3)  
Reading in the Content Area  
Fall, Spring. Preparation in the fundamental skills of teaching reading within a music classroom setting. Includes organization of instruction, protocols for oral language development, strategies for word skill development, reading comprehension, and assessment. Meeting times will be arranged.

MUED 4700(1 - 3)  
Readings in Music Education  
Fall, Spring. Special topics in music education. Admittance by consent of instructor. May be repeated.

MUED 4910(1 - 2)  
Teaching Practicum  
Fall, Spring. Supervised individualized teaching experience in area of specialization. Prerequisite: consent of instructor. Graded S/U.

MUED 4970(10 - 16)  
Student Teaching  

Subject: General Music  
MUS 99(0)  
Recital Attendance  
Fall, Spring. Required of all music majors for six semesters. Successful completion of course requires attendance at minimum of 15 on-campus music performances. Graded S/U.

MUS 1900(2)  
Beginning Guitar Non-Majors  
Fall, Spring. Introduction to the guitar, fundamentals of technique and music notation reading. Open to non-music majors only.

MUS 1910(2)  
Intermediate Guitar Non-Majors  
Fall, Spring. MUS 1900 continued. Open to non-music majors only. Prerequisites: MUS 1900 or previous experience and consent of instructor.

Subject: Music Performance Studies  
MUSP 1600(1)  
Sight Reading I  
Fall. Development of visual comprehension of intervallic patterns and basic rhythmic patterns for the keyboard player. Prerequisite: consent of instructor.

MUSP 1950(1)  
Pedal Harp Class  
Fall, Spring. Prerequisite: permission of instructor. Extra fee.
MUSP 2100(3)
Piano Repertoire I
Fall alternate years. Literature from early keyboard music through classical. Prerequisite: consent of instructor.

MUSP 2110(3)
Piano Repertoire II
Spring alternate years. Literature from Romantic era to present. Prerequisite: consent of instructor.

MUSP 2120(2)
Jazz Improvisation and Repertoire I
Fall alternate years. Techniques of jazz improvisation and related repertoire; application of basic scales, arpeggios, melodic construction to blues and standard pop tunes. Prerequisite: MUCT 1510 or consent of instructor.

MUSP 2130(2)
Jazz Improvisation and Repertoire II
Spring alternate years. Advanced techniques of jazz improvisation and related repertoire; application of modes, altered scales, chord extensions, chromatic harmony to jazz compositions. Prerequisite: MUSP 2120 or consent of instructor.

MUSP 2140(2)
Singer's Diction I
Fall. Fundamentals and application of the International Phonetic Alphabet (IPA) to selected English and Italian song texts. Instruction and drill in the rules of pronunciation as applied to the singing of these languages. Prerequisite: none.

MUSP 2150(2)
Organ Repertoire I
Fall alternate years. Literature from 1325 to the present, excluding the music of J.S. Bach. Prerequisite: consent of instructor.

MUSP 2160(2)
Organ Repertoire II
Spring alternate years. Organ music of J.S. Bach. Prerequisite: consent of instructor.

MUSP 2180(3)
Jazz Piano Fundamentals
Spring alternate years. Analysis of jazz piano accompaniment styles; techniques of left-hand voicing and rhythmic accompaniment; scale repertoire; piano arranging from lead sheets. Prerequisites: MUED 1510 and either a high score on placement exam or MUCT 1100, MUCT 1140 or MUCT 1150.

MUSP 2190(2)
Jazz Pedagogy
Fall (instrumentalists only), Spring (vocalists only). Prepares student to teach fundamentals of jazz improvisation, history, and jazz ensemble techniques. Prerequisite: MUCT 1510-Theory I or consent of instructor.

MUSP 2210(1-4)
Applied Percussion
Fall, Spring, Summer. Prerequisite: passage of audition. May be repeated. Extra fee.

MUSP 2240(2)
Singer's Diction II
Spring. Application of the International Phonetic Alphabet (IPA) to selected German and French song texts. Instruction and drill in the rules of pronunciation as applied to the singing of these languages. Prerequisite: MUSP 2140.

MUSP 2310(1-4)
Applied Trumpet
Fall, Spring, Summer. Prerequisite: passage of audition. May be repeated. Extra fee.

MUSP 2320(1-4)
Applied French Horn
Fall, Spring, Summer. Prerequisite: passage of audition. May be repeated. Extra fee.

MUSP 2330(1-4)
Applied Trombone
Fall, Spring, Summer. Prerequisite: passage of audition. May be repeated. Extra fee.

MUSP 2340(1-4)
Applied Euphonium
Fall, Spring, Summer. Prerequisite: passage of audition. May be repeated. Extra fee.

MUSP 2350(1-4)
Applied Tuba
Fall, Spring, Summer. Prerequisite: passage of audition. May be repeated. Extra fee.

MUSP 2410(1-4)
Applied Flute
Fall, Spring, Summer. Prerequisite: passage of audition. May be repeated. Extra fee.

MUSP 2420(1-4)
Applied Oboe
Fall, Spring, Summer. Prerequisite: passage of audition. May be repeated. Extra fee.

MUSP 2430(1-4)
Applied Clarinet
Fall, Spring, Summer. Prerequisite: passage of audition. May be repeated. Extra fee.
MUSP 2440 (1 - 4)
Applied Saxophone
Fall, Spring, Summer. Prerequisite: passage of audition. May be repeated. Extra fee.

MUSP 2450 (1 - 4)
Applied Bassoon
Fall, Spring, Summer. Prerequisite: passage of audition. May be repeated. Extra fee.

MUSP 2460 (1 - 4)
Applied Jazz Saxophone
Fall, Spring. May be repeated. Prerequisite: passage of audition. Extra fee.

MUSP 2470 (1 - 4)
Applied Jazz Trumpet
Fall, Spring. May be repeated. Prerequisite: passage of audition. Extra fee.

MUSP 2480 (1 - 4)
Applied Jazz Trombone
Fall, Spring. May be repeated. Prerequisite: passage of audition. Extra fee.

MUSP 2550 (1 - 4)
Applied Jazz Percussion
Fall, Spring. May be repeated. Prerequisite: passage of audition. Extra fee.

MUSP 2560 (1 - 4)
Applied Jazz Bass
Fall, Spring. May be repeated. Prerequisite: passage of audition. Extra fee.

MUSP 2600 (1 - 4)
Applied Jazz Guitar
Fall, Spring. May be repeated. Prerequisite: passage of audition. Extra fee.

MUSP 2610 (1 - 4)
Applied Piano
Fall, Spring, Summer. (Permission of instructor required for two or more credits.) Prerequisite: passage of audition. May be repeated. Extra fee.

MUSP 2620 (1 - 4)
Applied Harpsichord
Fall, Spring, Summer. Prerequisite: passage of audition. May be repeated. Extra fee.

MUSP 2630 (1 - 4)
Applied Organ
Fall, Spring, Summer. Prerequisite: passage of audition. May be repeated. Extra fee.

MUSP 2640E (1)
Accompanying Techniques I
Fall. Problems involving musical comprehension of solo part together with accompaniment and general introduction to vocal and instrumental accompaniment literature. Prerequisite: MUSP 1600 or consent of instructor.

MUSP 2650E (1)
Piano Four-Hand Class
Fall, Spring. May be repeated. Appropriate four-hand literature. Prerequisite: MUSP 1600 or consent of instructor.

MUSP 2690 (1 - 4)
Applied Jazz Piano
Fall, Spring. May be repeated. Prerequisite: passage of audition. Extra fee.

MUSP 2710 (2)
Para-Voice
Fall, Spring. No audition required. May be repeated. Extra fee.

MUSP 2720 (1 - 4)
Applied Voice
Fall, Spring, Summer. Prerequisite: passage of audition. May be repeated. Extra fee.

MUSP 2730 (1)
Musical Theatre Group Voice
Fall, Spring. Intended for first year Musical Theatre students. May be repeated. Two class periods per week. Focus on a basic knowledge of correct and healthy vocal techniques. Students will sing repertoire from the musical theatre as well as other age appropriate vocal literature. Designed to help students create a solid vocal base, which will enable free and expressive singing. Prerequisite: passage of audition into Musical Theatre major.

MUSP 2750 (2)
Introduction to Opera Theater
Fall. Basic terminology and practices of opera theatre.

MUSP 2810 (1 - 4)
Applied Violin
Fall, Spring, Summer. Prerequisite: passage of audition. May be repeated. Extra fee.

MUSP 2820 (1 - 4)
Applied Viola
Fall, Spring, Summer. Prerequisite: passage of audition. May be repeated. Extra fee.

MUSP 2830 (1 - 4)
Applied Cello
Fall, Spring, Summer. Prerequisite: passage of audition. May be repeated. Extra fee.

**MUSP 2840(1 - 4)**
Applied Double Bass
Fall, Spring, Summer. Prerequisite: passage of audition. May be repeated. Extra fee.

**MUSP 2850(1 - 4)**
Applied Harp
Fall, Spring, Summer. Prerequisite: passage of audition. May be repeated. Extra fee.

**MUSP 2860(1 - 4)**
Applied Classical Guitar
Fall, Spring, Summer. Prerequisite: passage of audition. May be repeated. Extra fee.

**MUSP 3050(2)**
Conducting I
Fall. Fundamental beat and cueing techniques; option of either instrumental or vocal emphasis. Prerequisite: passing grade on freshman placement exam or MUCT 1100, or consent of instructor.

**MUSP 3060(2)**
Conducting II
Spring. Advanced study and analysis of baton techniques, score reading and rehearsal procedures; option of either instrumental or vocal emphasis. Prerequisite: MUSP 3050 or consent of instructor. May be repeated up to 6 hours.

**MUSP 3100(1)**
Vocal Repertoire for the Young Singer
Fall. Designed for music education choral/musical theater majors only. Late 19th century to present with emphasis on British and American song literature for young singers.

**MUSP 3110(2)**
Vocal Repertoire I
Fall. Late 19th century to present British and American song literature; repertoire for high school vocal solo contest; Scandinavian and Russian song literature. Prerequisite: consent of instructor.

**MUSP 3120(2)**
Vocal Repertoire II
Spring alternate years. 19th and 20th century French and German art song literature. Prerequisite: consent of instructor.

**MUSP 3130(3)**
Jazz Arranging Analysis I
Fall alternate years. Swing repertoire, typical chord progressions, formal structure, melodic construction, compositional devices. Basic arranging techniques common to traditional big-band music. Prerequisite: MUSP 2130 or consent of instructor.

**MUSP 3140(3)**
Jazz Arranging Analysis II
Spring alternate years. Harmonic trends of bop period; substitute chords, altered chords, melodic and rhythmic treatment. Addition of double reeds, French horns, and strings to the big-band. Contemporary trends in jazz and commercial music, including small group and rock styles. Prerequisite: MUSP 3130 or consent of instructor.

**MUSP 3200E(1)**
Brass
Fall, Spring. Elective (small) ensemble. May be repeated.

**MUSP 3210E(1)**
Brass Choir
Spring. Elective (small) ensemble. May be repeated.

**MUSP 3220E(1)**
Classical Guitar
Fall, Spring. Elective (small) ensemble. May be repeated.

**MUSP 3230E(1)**
Electric Guitar
Fall, Spring. Elective (small) ensemble. May be repeated.

**MUSP 3240E(1)**
Euphonium-Tuba
Fall, Spring. Elective (small) ensemble. May be repeated.

**MUSP 3250E(1)**
Harp
Fall, Spring. Elective (small) ensemble. May be repeated.

**MUSP 3260E(1)**
Horn Club
Fall, Spring. Elective (small) ensemble. May be repeated.

**MUSP 3270E(1)**
Jazz
Fall, Spring. Elective (small) ensemble. May be repeated.

**MUSP 3280E(1)**
Jazz Lab I
Fall, Spring. Major (large) ensemble. May be repeated.

**MUSP 3290E(1)**
Jazz Lab II
Fall, Spring. Major (large) ensemble. May be repeated.

MUSP 3300E(1)
Mixed Chamber
Fall, Spring. Elective (small) ensemble. May be repeated.

MUSP 3310E(1)
Music Theater Productions
Fall, Spring. Elective (small) ensemble. May be repeated.

MUSP 3320E(1)
Percussion
Fall, Spring. Elective (small) ensemble. May be repeated.

MUSP 3330E(1)
Piano Accompaniment Practicum
Fall, Spring. Elective (small) ensemble. May be repeated.

MUSP 3340E(1)
Saxophone
Fall, Spring. Elective (small) ensemble. May be repeated.

MUSP 3350E(1)
String
Fall, Spring. Elective (small) ensemble. May be repeated.

MUSP 3360E(1)
Trombone Choir
Fall, Spring. Elective (small) ensemble. May be repeated.

MUSP 3370E(1)
Trumpet Guild
Fall, Spring. Elective (small) ensemble. May be repeated.

MUSP 3380E(1)
Varsity Quartet
Fall, Spring. Elective (small) ensemble. May be repeated.

MUSP 3390E(1)
Vocal Chamber Lab
Fall, Spring. Elective (small) ensemble. May be repeated.

MUSP 3400E(1)
Vocal Jazz Ensemble
Fall, Spring. Elective (small) ensemble. May be repeated.

MUSP 3410E(1)
Woodwind
Fall, Spring. Elective (small) ensemble. May be repeated.

MUSP 3600(1)
Sight Reading II
Spring. Rapid comprehension of complex intervallic and rhythmic patterns; special attention to ensemble precision. Prerequisite: MUSP 1600 or consent of instructor.

MUSP 3640(1)
Accompanying Techniques II
Spring. MUSP 2640 continued, using more advanced literature. Prerequisite: MUSP 2640 or consent of instructor.

MUSP 3670(3)
Piano Pedagogy I
Fall alternate years. Methods, materials and teaching techniques for the beginning pre-college student. Prerequisite: consent of instructor.

MUSP 3680(3)
Piano Pedagogy II
Spring alternate years. Methods, materials and teaching techniques for the intermediate pre-college student. Prerequisite: consent of instructor.

MUSP 3700(3)
Vocal Pedagogy
Spring. Basic concepts of vocal pedagogy; methods, materials and terminology. Prerequisite: consent of instructor.

MUSP 3780E(2)
Operata Theater
Fall, Spring. May be repeated. Development of stage techniques for more advanced students in productions of scenes and complete operas. Prerequisite: MUSP 2750 and consent of instructor.

MUSP 3960(2)
Service Playing I
Fall alternate years. Hymn playing, transposition, modulation, improvisation and accompanying at the organ. Prerequisite: consent of instructor.

MUSP 3970(2)
Service Playing II
Spring alternate years. MUSP 3960 continued. Prerequisite: MUSP 3960 or consent of instructor.
MUSP 4010 (2)
History and Literature of Jazz
Spring alternate years. Jazz from African influences through present developments; personalities involved in stylistic change.

MUSP 4020 (2)
Jazz Composition
Fall alternate years. Detailed analysis of modern jazz works, including the study of innovative compositional techniques used by historically significant writers. Numerous student writing projects for jazz combo are required. Prerequisite: MUCT 2370.

MUSP 4100 (3)
Harpsichord Repertoire I
Keyboard literature to 1700 based on original source material and contemporary editions; emphasis on performance. Prerequisite: consent of instructor.

MUSP 4110 (3)
Harpsichord Repertoire II
Solo harpsichord literature from 1700 to the present, emphasis on performance. Prerequisite: MUSP 4100 or consent of instructor.

MUSP 4150 (2)
Organ Construction
History of the design and construction of the organ. Prerequisite: consent of instructor.

MUSP 4160 (2)
Church Music
Music of the major Western churches; plainsong, hymnology, liturgies. Prerequisite: consent of instructor.

MUSP 4210 (1 - 4)
Applied Percussion
Fall, Spring, Summer. Prerequisite: passage of audition. May be repeated. Extra fee.

MUSP 4310 (1 - 4)
Applied Trumpet
Fall, Spring, Summer. Prerequisite: passage of audition. May be repeated. Extra fee.

MUSP 4320 (1 - 4)
Applied French Horn
Fall, Spring, Summer. Prerequisite: passage of audition. May be repeated. Extra fee.

MUSP 4330 (1 - 4)
Applied Trombone
Fall, Spring, Summer. Prerequisite: passage of audition. May be repeated. Extra fee.

MUSP 4400 (1)
Wind Ensemble
Fall. Major (large) ensemble. May be repeated.

MUSP 4420 (1 - 4)
Applied Oboe
Fall, Spring, Summer. May be repeated. Extra fee.

MUSP 4430 (1 - 4)
Applied Clarinet
Fall, Spring, Summer. May be repeated. Extra fee.

MUSP 4440 (1 - 4)
Applied Saxophone
Fall, Spring, Summer. Prerequisite: passage of audition. May be repeated. Extra fee.

MUSP 4450 (1 - 4)
Applied Bassoon
Fall, Spring, Summer. Prerequisite: passage of audition. May be repeated. Extra fee.

MUSP 4460(1 - 4)
Applied Jazz Saxophone
Fall, Spring. May be repeated. Prerequisite: passage of audition. Extra fee.

MUSP 4470(1 - 4)
Applied Jazz Trumpet
Fall, Spring. May be repeated. Prerequisite: passage of audition. Extra fee.

MUSP 4480(1 - 4)
Applied Jazz Trombone
Fall, Spring. May be repeated. Prerequisite: passage of audition. Extra fee.

MUSP 4500E(1)
Athletic Band
Spring. Major (large) ensemble. May be repeated.

MUSP 4520(2)
Percussion Repertoire and Pedagogy
Spring alternate years. Research into percussion repertoire and pedagogy. Required of students majoring in percussion performance.

MUSP 4530(2)
Brass Pedagogy
Spring alternate years. Teaching techniques and materials for brass instruments. Prerequisite: consent of instructor.

MUSP 4540(2)
Woodwind Pedagogy
Spring. Teaching techniques and materials for woodwind instruments. Prerequisite: consent of instructor.

MUSP 4550(1 - 4)
Applied Jazz Percussion
Fall, Spring. May be repeated. Prerequisite: passage of audition. Extra fee.

MUSP 4560(1 - 4)
Applied Jazz Bass
Fall, Spring. May be repeated. Prerequisite: passage of audition. Extra fee.

MUSP 4580(2)
String Pedagogy
Spring alternate years. Upper and lower strings. Principles of teaching string instruments. Investigation of related literature and materials. Prerequisite: consent of instructor.

MUSP 4590(2)
Organ Pedagogy
Spring alternate years. Principles, techniques and literature applied to various levels of organ study. Prerequisite: consent of instructor.

MUSP 4600(1 - 4)
Applied Jazz Guitar
Fall, Spring. May be repeated. Extra fee.

MUSP 4610(1 - 4)
Applied Piano
Fall, Spring, Summer. (Permission of instructor required for 2 or more credits hours.) Prerequisite: passage of audition. May be repeated. Extra fee.

MUSP 4620(1 - 4)
Applied Harpsichord
I, II. Prerequisite: passage of audition. May be repeated. Extra fee.

MUSP 4630(1 - 4)
Applied Organ
Fall, Spring, Summer. Prerequisite: passage of audition. May be repeated. Extra fee.

MUSP 4640(2)
Duo Repertoire
Spring. A survey of the instrumental sonata and duo repertoire for various instruments and piano. Focus is on listening and analysis of repertoire and includes a limited amount of performance. Prerequisite: MUCT 2620.

MUSP 4650(1)
Orchestral Audition Repertoire for Cello and String Bass
Study and performance of orchestral excerpts and other audition repertoire related to the orchestral audition. May be repeated to two hours. Prerequisite: consent of instructor(s).

MUSP 4660(1)
Piano Pedagogy Practicum
Fall, Spring. May be repeated. Laboratory in supervised piano teaching, both private and classes. Prerequisite: MUSP 3670 or consent of instructor.

MUSP 4670(2)
Guitar Pedagogy
On Demand. Principles, techniques, and literature applied to various levels of guitar study. Prerequisite: consent of instructor.

MUSP 4680(1)
Orchestral Audition Repertoire for Violin
Study and performance of orchestral excerpts and other audition repertoire. May be repeated for credit. Prerequisite: consent of instructor.

**MUSP 4690 (1 - 4)**
Applied Jazz Piano
Fall, Spring. May be repeated. Prerequisite: passage of audition. Extra fee.

**MUSP 4700 (1 - 4)**
Readings, Research and Performance in Music
Fall, Spring, Summer. May be repeated. Directed independent readings, research and/or performance related to performance studies. Prerequisites: consent of instructor and department chair.

**MUSP 4710 (2)**
Para-Voice
Fall, Spring. No audition required. May be repeated. Extra fee.

**MUSP 4720 (1 - 4)**
Applied Voice
Fall, Spring, Summer. Prerequisite: passage of audition. May be repeated. Extra fee.

**MUSP 4730 (1)**
Vocal Pedagogy Practicum
Fall, Spring. May be repeated. Supervised teaching of both private and class voice. Includes participation in designated segments of MUED 2400 and/or MUED 3400. Prerequisite: MUSP 3700 or consent of instructor.

**MUSP 4760E (1)**
University Choral Society
Fall, Spring. Major (large) ensemble. May be repeated.

**MUSP 4770E (1)**
A Cappella Choir
Fall, Spring. Major (large) ensemble. May be repeated.

**MUSP 4780E (2)**
Collegiate Chorale
Fall, Spring. Major (large) ensemble. May be repeated.

**MUSP 4790E (1)**
University Women's Chorus
Fall, Spring. Elective (large) ensemble. May be repeated.

**MUSP 4800E (1)**
University Men's Chorus
Fall, Spring. Elective (large) ensemble. May be repeated.

**MUSP 4810 (1 - 4)**
Applied Violin
Fall, Spring, Summer. Prerequisite: passage of audition. May be repeated. Extra fee.

**MUSP 4820 (1 - 4)**
Applied Viola
Fall, Spring, Summer. Prerequisite: passage of audition. May be repeated. Extra fee.

**MUSP 4830 (1 - 4)**
Applied Cello
Fall, Spring, Summer. Prerequisite: passage of audition. May be repeated. Extra fee.

**MUSP 4840 (1 - 4)**
Applied Double Bass
Fall, Spring, Summer. Prerequisite: passage of audition. May be repeated. Extra fee.

**MUSP 4850 (1 - 4)**
Applied Harp
Fall, Spring, Summer. May be repeated. Extra fee.

**MUSP 4860 (1 - 4)**
Applied Classical Guitar
Fall, Spring, Summer. Prerequisite: passage of audition. May be repeated. Extra fee.

**MUSP 4880E (1)**
Chamber Orchestra
Elective (large) ensemble. May be repeated.

**MUSP 4890E (2)**
Philharmonia
Fall, Spring. Major (large) ensemble. May be repeated.

**MUSP 4950 (2)**
Senior Recital
Fall, Spring, Summer. May be repeated. For performance studies majors only. Required full recital for all degree options. Repertoire requirements determined by respective areas/studios. Prerequisite: satisfactory completion of recital jury and consent of department chair.

**Subject: Neuroscience**

**NEUR 4500 (1)**
Neuroscience Seminar
Fall, Spring. Weekly seminar and discussion of research in neuroscience. May be repeated, but only 3 hours may be applied toward a neuroscience major or minor. Prerequisite: consent of instructor. Graded S/U.
NEUR 4700(1 - 3)
Introduction to Neuroscience Research
Fall, Spring, Summer. Faculty supervised, independent research in neuroscience. May be repeated but only 3 credits may be applied toward a neuroscience major or minor. Prerequisite: consent of instructor. Graded S/U.

Subject: Nursing
NURS 1000(1)
Orientation to Nursing
Fall. Assists freshmen in choosing nursing as major and career goal; professional nurse's role, history of nursing, future trends in relation to current U.S. health care delivery system.

NURS 3010(3)
Nursing Agency I: Concepts
Summer. Provides foundational knowledge of nursing theory, professional concepts, therapeutic communication and applied interventions. Incorporates laboratory experience with simulated clients. Prerequisite: Admission to major. Corequisite: NURS 3110. Extra fee.

NURS 3060(3)
Holistic Approach to Nursing Interventions
Spring. Focus on holistic model integrating technology, scientific knowledge and alternative/complementary caring modalities into basic and advanced practices of nursing. Elective course.

NURS 3070(2)
Nursing Care of the Terminally Ill: Issues in Palliative Care
Spring. Theory course focuses on concepts, knowledge and skills necessary to provide holistic nursing care to individuals and their significant others who are affected by a terminal illness. Elective course. Prerequisite: NURS 3120.

NURS 3110(3)
Nursing Agency II: Assessment
Summer. Provides for acquisition of knowledge and development of skill in comprehensive nursing assessment. Prerequisite: Admission to major. Corequisite: NURS 3010. Extra fee.

NURS 3120(7)
Adult Health Nursing I
Fall. Care of adults with common nursing problems using Orem's Self-Care Deficit Theory of Nursing. Prerequisites: NURS 3010, NURS 3110. Corequisites: NURS 3170, NURS 3180, NURS 3210. Extra fee.

NURS 3130(3)
Gerontological Nursing
Fall. Focus on theories and concepts of aging and health, based on Universal Self-Care Requisites from Orem's Self-Care Deficit Theory of Nursing. Prerequisites: NURS 3120, NURS 3170, NURS 3180, NURS 3210.

NURS 3170(3)
Concepts of Pathophysiology
Fall. Basic science of pathophysiology of disease across the life span. Prepares for critical thinking in application of concepts to nursing practice. Prerequisites: NURS 3010, NURS 3110. Corequisites: NURS 3120, NURS 3180, NURS 3210.

NURS 3180(3)
Concepts of Nursing Pharmacology
Fall. Fundamental pharmacologic principles of physiological response to drugs, therapeutic outcomes, and potential drug interactions. Prepares for critical thinking in application of pharmacotherapy principles to nursing. Prerequisites: NURS 3010, NURS 3110. Corequisites: NURS 3120, NURS 3170, NURS 3210.

NURS 3210(3)
Nursing Agency III: Interventions
Fall. Application of principles of nursing interventions in the learning lab on simulated clients. Prerequisites: NURS 3010 and NURS 3110. Corequisites: NURS 3120, NURS 3170, NURS 3180. Extra fee.

NURS 3620(6)
Women's Health Nursing

NURS 3630(6)
Mental Health Nursing
Fall, Spring. Psychosocial influences on self-care agency are presented within context of culturally competent nursing care. Concepts are interpreted within self-care deficit theory and applied in clinical experience. Prerequisites: NURS 3120, NURS 3170, NURS 3180, NURS 3210. Corequisites: NURS 3130, NURS 4010. Extra fee.

NURS 3640(6)
Parent-Child Nursing

NURS 4010(6)
Community Health Nursing
Fall, Spring. Focuses on design and implementation of nursing care for aggregates and communities. Individual and family care is provided within context of population health. Prerequisites: NURS 3120, NURS 3170, NURS 3180, NURS 3210. Corequisites: NURS 3130, NURS 3630. Extra fee.

NURS 4020(3)
Leadership and Management in Nursing
Spring. Principles and theories of management and leadership as a basis for provision of nursing care. Prerequisites: NURS 3130, NURS 3620, NURS 3630, NURS 3640, NURS 4010, NURS 4950. Corequisite: NURS 4030.
NURS 4030(7)
Adult Health Nursing II
Spring. Design and implementation of nursing systems for the adult population with complex health states. Includes application of nursing leadership principles in clinical settings. Prerequisites: NURS 3130, NURS 3620, NURS 3630, NURS 3640, NURS 4010, NURS 4950. Corequisites: NURS 4020, NURS 4250. Extra fee.

NURS 4050(3)
Oncology Nursing
Fall, Spring. Focuses on concepts, knowledge and skills necessary to assist individuals who have cancer and their families. Emphasizes helping people to care for themselves throughout their illness. Prerequisite: first semester nursing courses or RN, or permission of instructor. Elective course.

NURS 4080(4)
Perioperative Nursing Care
Spring. Clinical elective with focus on the practice of perioperative nursing. Prerequisites: NURS 3120, NURS 3170, NURS 3180, NURS 3210. Extra fee.

NURS 4120(5)
Nursing Leadership and Management
Fall, Spring. Focus on principles of management and leadership for the baccalaureate prepared nurse. Provision of professional care in a variety of settings. Prerequisites: NURS 4230, NURS 4180, NURS 4190. Extra fee.

NURS 4140(4)
Research Inquiry I and II
Spring, Summer. Students will critically evaluate published research for clinical relevance, identify a research problem, select a conceptual framework, review selected literature, and prepare a quantitative or qualitative research proposal. Prerequisites: admission to the RN/MSN program and permission of Undergraduate Associate Dean.

NURS 4150(3)
Advanced Pathophysiology
Fall. Overview of pathologic processes that influence the development of disease in humans. Includes discussion of normal function and the impact of disease on health. Prerequisite: admission to the RN/MSN program and permission of Undergraduate Associate Dean.

NURS 4160(3)
Advanced Health Assessment
Fall. Focuses on specialty specific comprehensive and problem focused advanced patient assessment. Specialty laboratory practice and supervision are required. Prerequisites: admission to RN/MSN program and permission of Undergraduate Associate Dean. Extra fee.

NURS 4170(3)
Health Care Aspects of Human Sexuality
Spring. Impact on health care of selected components of human sexuality. Aspects include sexual assessment, changes during the life span and disturbances in sexuality due to health conditions. Prerequisites: first semester nursing courses or RN. Elective course.

NURS 4180(4)
Theoretical and Professional Foundations in Nursing
Fall. Focuses on specialty specific comprehensive and problem focused advanced patient assessment. Specialty laboratory practice and supervision are required. Prerequisites: admission to RN/MSN program and permission of Undergraduate Associate Dean. Extra fee.

NURS 4190(6)
Interpersonal Strategies in Nursing of Older Adults
Fall, Spring. Focus on application of self-care deficit theory of nursing and health maintenance for older individuals within the family and environment. Pre- or corequisite: NURS 4230, NURS 4180. Extra fee.

NURS 4200(5)
Population Focused Care
Fall. Focuses on the design and implementation of nursing care for aggregates and communities. Individual and family care is provided within the context of population focused care. Prerequisites: NURS 4180, NURS 4190, NURS 4230. Extra fee.

NURS 4210(3)
Applied Nursing Research
Fall, Spring. Emphasizes all phases of the research process. Analysis and application of research strategies for the professional nurse. Prerequisite: Admission to the RN/BSN program.

NURS 4220(4)
Applied Pathophysiology and Pharmacology
Fall, Spring. Concepts of pathophysiology and pharmacology. Prepares for critical thinking in application of concepts to nursing practice. Prerequisite: Admission to RN/BSN program.

NURS 4230(3)
Applied Health Assessment
Fall, Spring. Nursing application of health history, physical and psychosocial assessment skills across the lifespan. Prerequisite: Admission to RN/BSN program. Extra fee.

NURS 4250(2)
Professional Nursing Competency
This course provides an overview of NLCEX and practice in the application of knowledge required for the professional nursing examination. Corequisites: NURS 4020, NURS 4030.

NURS 4280(3)
Theories of Addictive Behaviors
Spring. Research and treatment related to addictive behaviors are critiqued. Nursing interventions specific for addicted persons are evaluated. Implications of legal/social/health policies on services for this
population are explored. Elective course.

**NURS 4600 (4)**
*Critical Care Nursing*
Spring. Clinical elective with focus on design and implementation of partially and wholly compensatory nursing systems for clients with critical health states. Prerequisites: NURS 3130, NURS 3620, NURS 3630, NURS 3640, NURS 4010. Extra fee.

**NURS 4700 (1 - 3)**
*Independent Study in Nursing*
Fall, Spring, Summer. Research or project designed with guidance of a faculty member. Open to senior students with consent of a faculty member. May be repeated.

**NURS 4720 (4)**
*Perinatal Nursing*
Spring. Clinical elective with focus on advanced issues in women's and neonatal health care. Prerequisites: NURS 3130, NURS 3620, NURS 3630, NURS 3640, NURS 4010. Extra fee.

**NURS 4950 (3)**
*Nursing Research*
Fall, Spring. Introduction to concepts, issues, and processes in nursing research. Emphasis on critical analysis and evaluation of published research for nursing practice and research role of baccalaureate nurse. Prerequisites: NURS 3120, NURS 3170, NURS 3180, NURS 3210.

**Subject: Operations Research**

**OR 3800 (3)**
*Introduction to Management Science*
Fall, Spring, Summer. Introduces various quantitative approaches for modeling and solving business problems. Topics include linear programming models and solution methods, problem formulation via integer and goal programming, decision analysis under uncertainty and simulation. Prerequisites: MIS 2000 and STAT 2110 or STAT 2200. Extra fee.

**OR 4820 (3)**
*Computer Simulation of Management Systems*
Techniques of setting up stochastic models for inventory, production, queuing, scheduling, economic systems; implementing these models using computer simulation languages (e.g. GPSS). Prerequisites: STAT 2120 or STAT 2200 or MATH 4420 and at least one computer programming course.

**Subject: Peace & Conflict Studies**

**PACS 2000 (3)**
*Introduction to Peace and Conflict Studies*
Fall. An overview of scholarship in the field of peace and conflict studies, with emphasis on disciplines such as history, political science, communication, ecology, law, education, psychology, literature, culture studies, and ethics. Core concepts such as peace, conflict, violence, nonviolence, conflict resolution, and justice are examined and applied to current issues.

**PACS 3000 (3)**
*Peace and Cultural Legacies in the Nuclear Age*
Spring. This is an interdisciplinary course on peace and cultural legacies in the nuclear age, with emphasis on how Asians and Americans have lived under the threat of nuclear war. It will examine the impact of nuclear bombings, their threats on peace, and the cultural history of the nuclear arms race and peace movements in the context of Asian and American philosophy, science, politics, art, literature, and education. Credit allowed for only one of ASIA 3000 or PACS 3000.

**PACS 4000 (3)**
*Topics in Peace and Conflict*
Study of selected topics or subject areas. Course may be repeated for credit up to 6 hours if topics clearly differ.

**PACS 4100 (3)**
*Peace and Conflict Studies Abroad*
Short term field study to examine peace and conflict issues in another culture. May be repeated up to 6 credits if travel is to different sites.

**PACS 4700 (1 - 3)**
*Individual Readings in Peace and Conflict*
Supervised individual work designed to meet student's need for extended reading in Peace and Conflict studies. Prerequisite: consent of supervising instructor. May be repeated to 6 hours.

**PACS 4890 (1 - 3)**
*Field Study in Peace and Conflict*
Internship or directed study involving examination of Peace and Conflict issues in the community. Prerequisite: consent of supervising instructor. May be repeated to 6 hours.

**Subject: Physical Education, General**

**PEG 1000 (1)**
*Physical Education General*
Fall, Spring, Summer. Each activity course develops the knowledge, understanding and skills pertinent to the activity. Most activities are coeducational. Offerings each term will vary. Graded S/U.

**PEG 2000 (1)**
*Physical Education General*
Fall, Spring, Summer. Develops knowledge, understanding and skills pertinent to the activity. Most activities are coeducational. Offerings vary each term. May be taken for grade or S/U.

**PEG 2040 (1)**
*Aerobic Dance*
Activity course.
PEG 2070 (1)
Badminton
Fall, Spring. Instruction and training in the principles, knowledge, and skills pertinent to beginning badminton.

PEG 2080 (1)
Basketball
Fall, Spring. Development of skills, knowledge, and strategies of basketball.

PEG 2110 (1)
Bowling
Fall, Spring. Instruction and training in the principles, knowledge, and skills pertinent to beginning bowling. Extra fee.

PEG 2170 (1)
Cycling
Fall, Spring. Instruction and training in the principles, knowledge, and skills of cycling.

PEG 2180 (1)
Curling
Activity course. Extra fee.

PEG 2220 (1)
Classical Ballet I
Activity course.

PEG 2230 (1)
Classical Ballet II
Activity course.

PEG 2240 (1)
Classical Ballet III
Activity course.

PEG 2300 (1)
Modern Dance I
Activity course.

PEG 2330 (1)
Modern Dance II
Activity course.

PEG 2320 (1)
Modern Dance III
Activity course.

PEG 2340 (1)
Tap Dance II
Activity course.

PEG 2400 (1)
Exercise and Conditioning
Fall, Spring. Instruction and training in the principles, knowledge, and skills necessary to improve cardiovascular endurance, muscular strength and endurance, and flexibility. Individualized exercise programs are developed.

PEG 2410 (1)
Fencing
Activity course. Extra fee.

PEG 2420 (1)
Intermediate Fencing
Activity course.

PEG 2430 (1)
Fitness Walking
Fall, Spring. Non-competitive aerobic walking; individualized workouts. Emphasis is on walking techniques, the benefits of walking to improve fitness, injury prevention, safety, and walking opportunities.

PEG 2440 (1)
Coed Flag Football
Activity course.

PEG 2460 (1)
Golf
Activity course. Extra fee.

PEG 2470 (1)
Intermediate Golf
Fall, Spring. Instruction and training in the principles, knowledge, and skills pertinent to intermediate golf. Extra fee.

PEG 2480 (1)
Advanced Golf
Activity course. Extra fee.

PEG 2510 (1)
Handball
Activity course.
PEG 2530(1)
Basic Hockey
Activity course. Extra fee.

PEG 2580(1)
Water Aerobics
Activity course.

PEG 2600(1)
Beginning Ice Skating
Activity course. Extra fee.

PEG 2610(1)
Figure Skating
Activity course. Extra fee.

PEG 2630(1)
Jogging
Activity course.

PEG 2640(1)
Karate
Activity course.

PEG 2650(1)
Racquetball
Fall, Spring. Instruction and training in the principles, knowledge, and skills pertinent to beginning racquetball.

PEG 2660(1)
Intermediate Racquetball
Activity course.

PEG 2680(1)
Self Defense
Activity course.

PEG 2710(1)
Soccer
Activity course.

PEG 2720(1)
Intermediate Soccer
Activity course.

PEG 2750(1)
Softball - Coed
Activity course.

PEG 2760(1)
Squash
Activity course.

PEG 2780(1)
Life Guard Training
Activity course. Extra fee.

PEG 2800(1)
Beginning Swimming
Activity course. Extra fee.

PEG 2810(1)
Intermediate Swimming
Activity course. Extra fee.

PEG 2820(1)
Advanced Swimming
Activity course. Extra fee.

PEG 2830(1)
Tennis
Activity course.

PEG 2860(1)
Volleyball
Activity course.

PEG 2870(1)
Weight Training
Activity course.

PEG 2910(1)
Tension Management
Activity course.

Subject: Philosophy
PHIL 1010(3)
Introduction to Philosophy
Fall, Spring. Systematic study of enduring human concerns about God, morality, society, the self and
PHIL 1020(3)
Introduction to Ethics
Fall, Spring. Discussion of ethical concepts such as good and evil and right and wrong in the context of contemporary moral issues; major ethical theories as a basis for dealing with contemporary moral concerns. Credit not given for both PHIL 1020 and PHIL 1250. Applicable to the BG Perspective (general education) humanities and arts requirement.

PHIL 1030(3)
Introduction to Logic
Fall, Spring. Basic concepts of logic; how to distinguish arguments from non-arguments, premises from conclusions. Methods for evaluating arguments and how to recognize typical mistakes in reasoning. Applicable to the BG Perspective (general education) humanities and arts requirement.

PHIL 1250(3)
Contemporary Moral Issues
Fall or Spring. Study of contemporary moral problems with a focus on what values are and how they differ from facts. Topics may include abortion, promise-keeping, mercy killing, academic dishonesty, and animal rights. Credit not given for both PHIL 1250 and PHIL 1020. Applicable to the BG Perspective (general education) humanities and arts requirement.

PHIL 2020(3)
History of Ethics
Fall or Spring. A study of the classic moral philosophers who have shaped modern thought on the subject, including Aristotle, Hume, Kant and Mill. Attention will be paid to the views of each on moral psychology.

PHIL 2040(3)
Aesthetics
Fall, Spring. Meaning of "beauty" or aesthetic value in art and nature, approached problematically and applied to present-day experiences. Applicable to the BG Perspective (general education) humanities and arts requirement.

PHIL 2110(3)
History of Ancient Philosophy
Fall. Progress of Greek philosophy from its earliest origins in Greece through the Presocratics, Plato and Aristotle, concluding with main themes of Hellenistic, Roman and medieval philosophy. PHIL 2110 can function as an excellent introduction to philosophy. Applicable to the BG Perspective (general education) humanities and arts requirement.

PHIL 2120(3)
History of Modern Philosophy
Spring. Focus on rationalists (Descartes and Leibniz), empiricists (Locke, Berkeley and Hume) and Kant. Attention to the emergence of skepticism and the rise of modern science as influences on modern philosophy; can function as an excellent introduction to philosophy.

PHIL 2170(3)
World Religions
Fall or Spring. Fundamental tenets of major world religions-Hinduism, Buddhism, Confucianism, Taoism, Judaism, Christianity and Islam, with the cultural backgrounds of lands of their development.

PHIL 2180(3)
Philosophy of Law
Fall and Spring. Philosophical foundations of legal system; essential nature of law and relation to morality, liberty, justice and legal responsibility (intention, human causality, negligence, mens rea, fault, etc.) and punishment.

PHIL 2190(3)
Philosophy of Death and Dying
Fall and Spring. Conceptual, metaphysical and epistemological issues related to nature of death; existential issues related to human significance of death for individual and community; normative issues related to care of dying. Applicable to the BG Perspective (general education) humanities and arts requirement.

PHIL 2200(3)
Business Ethics
Fall or Spring. Value conflicts that arise in business situations and philosophical ways of resolving them including issues involving the social responsibility of business people.

PHIL 2240(3)
Socialism, Capitalism and Democracy
Fall or Spring. Theory behind modern capitalism, socialism and democracy. Topics include individualism, community, freedom, justice and democratic representation. Applicable to the BG Perspective (general education) humanities and arts requirement.

PHIL 2270(3)
Philosophy of Punishment
Fall and Spring. Basic theories of punishment and whether punishment is justified. Issues include punishment versus rehabilitation, capital punishment, the insanity defense and related issues. Applicable to the BG Perspective (general education) humanities and arts requirement. Approved for Distance Ed.

PHIL 2300(3)
Scientific Reasoning
Fall or Spring. Study of the scientific method which develops skills for interpreting scientific findings and evaluating theories, tests and causal and statistical claims. One component deals with decision-making procedures based on these evaluations. No prerequisites. Applicable to the BG Perspective (general education) humanities and arts requirement.

PHIL 2360(3)
Philosophy of Film
Alternate years. Aesthetic theories concerning definition of film as distinctive art form; criteria for
evaluation of films. Popular, documentary, art and experimental films shown in class.

**PHIL 2400(3)**
**Topics in Philosophy**
Fall, Spring. Subject matter designated in class schedule. Primarily for students with little or no background in philosophy. May be repeated.

**PHIL 2420(3)**
**Medical Ethics**
Fall and Spring. Selected topics such as genetic engineering, euthanasia, honesty with the dying and human experimentation viewed from perspective of representative ethical theories. Applicable to the BG Perspective (general education) humanities and arts requirement.

**PHIL 2450(3)**
**Philosophy of Feminism**
Fall or Spring. Philosophical presuppositions and specific proposals of feminists; views on sex roles, human welfare, justice and equality, rights, self-actualization, self-respect, autonomy, exploitation, oppression, freedom and liberation, reform and revolution. Applicable to the BG Perspective (general education) humanities and arts requirement.

**PHIL 3000(3)**
**Life, Death, Law and Morality**
Fall or Spring. Examination of normative philosophical concepts such as justice, responsibility, freedom, utility, rights, etc.; their justification; and the use of these concepts in argument about such issues as the value of life and the nature of death, the appropriateness of capital punishment, the relationship between the law and morality, etc. Open only to juniors and seniors with no previous courses in philosophy, or admitted by consent of instructor. Applicable to the BG Perspective (general education) humanities and arts requirement.

**PHIL 3020(3)**
**Ethical Theory**
Fall or Spring. A survey of classical and contemporary theoretical approaches to moral philosophy. Covers such theories as utilitarianism, deontology, virtue ethics, ethical relativism, and the divine command theory. Prerequisite: three hours in PHIL or consent of instructor.

**PHIL 3030(3)**
**Symbolic Logic**
Alternate years. Notation and proof procedures used by modern logicians to deal with special problems beyond traditional logic; propositional calculus, truth tables, predicate calculus, nature and kinds of logical proofs. Prerequisite: three hours in PHIL, MATH 2320, or consent of instructor.

**PHIL 3100(3)**
**Philosophy of Mind**
Fall or Spring. Topics covered will include some of the nature of mental phenomena, the relation between minds and bodies, free will, the relationship between thought and action, and the problem of other minds. Prerequisite: 3 hours in Philosophy.

**PHIL 3110(3)**
**History of Medieval Philosophy**
On demand. Major philosophical positions of Middle Ages; St. Augustine through Renaissance philosophers. Prerequisite: three hours in PHIL or consent of instructor.

**PHIL 3120(3)**
**Social and Political Philosophy**
Fall or Spring. Some of the classics of political thought, including works by Hobbes, Locke, Rousseau, Smith and Marx. Topics include liberty and authority, justice and equality. Prerequisite: three hours in PHIL or consent of instructor.

**PHIL 3160(3)**
**Philosophy of Psychology**
On demand. Study of philosophical underpinnings and implications of major movements in psychology, including the discovery of the unconscious, behaviorism, cognitive science, artificial intelligence and sociobiology. Prerequisite: three hours in PHIL or consent of instructor.

**PHIL 3170(3)**
**Philosophy of Religion**
Fall or Spring. Nature of religion; gods and/or God; faith, revelation and religious belief; evil and righteousness; meaning of life. Readings from variety of sources, largely contemporary. Prerequisite: three hours in PHIL or consent of instructor.

**PHIL 3210(3)**
**Indian and Chinese Philosophy**
On demand. Some non-Western philosophical traditions. Possible topics include Taoism, Confucianism, Buddhism and Vedanta; epistemology, formal inference, causality, metaphysics, mind-body relationships. Prerequisite: three hours in PHIL or consent of instructor. Applicable to the BG Perspective (general education) humanities and arts and international perspective requirements.

**PHIL 3300(3)**
**Theory of Knowledge**
Alternate years. Theories of knowledge, truth, belief and evidence. Prerequisite: three hours in PHIL or consent of instructor.

**PHIL 3310(3)**
**Existentialism**
Alternate years. Various existential themes, including the meaning of life, human freedom, the limits of reason, the meaning of death and the individual vs. society. Kierkegaard, Nietzsche, Dostoevsky, Camus, Sartre, Jaspers, Buber and others comprise the reading. Prerequisite: three hours in PHIL or consent of instructor.

**PHIL 3320(3)**
**Environmental Ethics**
Fall or Spring. Critical evaluation of prevalent standards used in responding to long-standing and emerging environmental problems. Prerequisite: three hours in PHIL or consent of instructor. Applicable to the BG Perspective (general education) humanities and arts requirement.

PHIL 3390(3)
Meditation: Practice and Theory
Fall or Spring. Integrate insight (mindfulness) meditation practice with theoretical reflection about a variety of meditation techniques and practices that have been developed in diverse meditation traditions. Weekend field trip required. Prerequisite: three hours in PHIL or consent of instructor. Extra fee.

PHIL 3400(3)
Problems in Philosophy
On demand. Subject matter designated in class schedule. May be repeated. Prerequisite: three hours in PHIL or consent of instructor.

PHIL 3440(3)
Computers and Philosophy
Fall or Spring. Philosophical dimensions of the impact of computers on society with emphasis on the issues of ethics and artificial intelligence. Prerequisite: three hours in PHIL or CS or consent of instructor.

PHIL 3950(1 - 4)
Workshop on Current Topics
Fall, Spring on demand. Intensive educational experience on selected topics. Typically, an all-day or similar concentrated time format is used. Requirements are usually completed within this expanded time format. May be repeated if topics differ and adviser approves.

PHIL 4060(3)
Philosophy of Language
Alternate years. Historical and contemporary theories of meaning; their use in resolving traditional philosophical controversies and in providing foundation for contemporary analytic philosophy; various interdisciplinary connections. Prerequisite: six hours in PHIL or consent of instructor.

PHIL 4110(3)
History of Contemporary Anglo-American Philosophy
Alternate years. Major twentieth century movements in the analytic tradition, including ideal language philosophy, ordinary language philosophy and naturalized, holistic philosophy, including such philosophers as Russell, Austin, Wittgenstein, Quine, Davidson, Putnam and Rorty. Prerequisite: six hours in PHIL or consent of instructor.

PHIL 4120(3)
Contemporary Continental Philosophy
Alternate years. Major twentieth century movements in France and Germany, beginning with the phenomenology of Husserl, proceeding through Sartre and Heidegger and including philosophical hermeneutics, critical theory, the theory of communication and genealogies of values, with attention to such philosophers as Gadamer, Ricoeur and Derrida, Adorno, Habermas and Foucault. Prerequisite: six hours of PHIL or consent of instructor.

PHIL 4140(3)
Metaphysics
Alternate years. Survey of traditional metaphysical issues and concepts combined with in-depth treatment of some metaphysical problem(s). Prerequisite: six hours in PHIL or consent of instructor.

PHIL 4180(3)
Topics in the Philosophy of Law
On demand. In-depth examination of such topics as the nature and analysis of law, legal reasoning, judicial decision, hard cases, responsibility, causation and fault, the mental element in crime, formal and material principles of justice and the legal enforcement of morality. Prerequisite: six hours in PHIL or consent of instructor. May be repeated with different topics.

PHIL 4200(3)
Topics in Social and Political Philosophy
Alternate years. An in-depth treatment of some theme(s) in social and political philosophy, including the justification of the state, the nature of citizens' obligations to the state, justifications for limiting liberties, state neutrality vs. perfectionism, the nature and justification of various social ideals, feminism and justice.

PHIL 4250(3)
Topics in Moral Philosophy
Alternate years. An in-depth treatment of some theme(s) in moral philosophy. Topics may include classic and contemporary debates in metaethics, normative ethical theory, and/or applied ethics. Prerequisite: 6 hours in PHIL or consent of instructor.

PHIL 4310(3)
Topics in Philosophy of Science
On demand. Content varies from year to year. Topics include: nature of scientific explanation, causality, contemporary empiricism, philosophy of biology, methods, presuppositions, concepts of behavioral sciences. May be repeated for credit. Prerequisite: six hours in PHIL or consent of instructor. May be repeated with different topics.

PHIL 4320(3)
Philosophy of Social Science
Alternate years. Methods, ideals and politics of social inquiry. Topics include the very idea of a social science, explanation, prediction and laws, problems of interpretation and meaning, the nature of rationality, reductionism, individualism and holism, and objectivity and values. Prerequisite: six hours in PHIL, PSTYC, SOC or HIST or consent of instructor.

PHIL 4330(3)
Philosophy and Physics of Space and Time
Alternate years. Physical theories of space and time from philosophical, scientific and historical points of view. Topics include Zeno's paradoxes, Greek concepts of space and time, classical Newtonian world view, general ideas of modern theory of relativity and cosmology. Course presupposes high school-level mathematics
only. Cross-disciplinary; cross-listed as PHYS 4330. Prerequisite: six hours in PHIL, MATH or PHYS or consent of instructor.

PHIL 4400(3)
Senior Seminar
Fall or Spring. Extended research project on a topic of the student's choice. The focus will be on formulating a thesis and pursuing appropriate means of developing it in a research project. Class meetings will focus on research methodologies and on students' discussion of their projects. Collaborative learning is required. Prerequisite: required of all philosophy majors with senior standing. Open to others by permission of the instructor.

PHIL 4420(3)
Philosophy of Medicine
On demand. In-depth examination of selected issues in medical epistemology, philosophy of science and the philosophy of mind, drawing on the continental philosophical tradition to examine professional and social constructs and their impact on the therapeutic relationship. Prerequisite: six hours in PHIL or consent of instructor. May be repeated with different topics.

PHIL 4450(3)
Topics in Business Ethics
On demand. In-depth examination of some issue(s) in business ethics, such as the moral limits of the market, the relative merits of capitalism and socialism, the nature and value of work, and/or the ethical aspects of corporate governance, advertising, workplace privacy, and international business. Prerequisite: six hours in PHIL or consent of instructor. May be repeated with different topics.

PHIL 4700(1 - 3)
Readings and Research
Fall, Spring. Supervised independent work in selected areas. Prerequisites: 12 hours of PHIL and consent of chair of department. May be repeated to six hours.

PHIL 4800(3)
Seminar in Philosophy
On demand. In-depth examination of one specific philosopher, philosophic movement or problem. Determined by need and interest of student. Prerequisite: six hours in PHIL or consent of instructor. May be repeated.

Subject: Physics
PHYS 1000(3)
Physics of Natural World
Summer. Survey course for non-science majors. Elementary description of major physics concepts and principles with contemporary applications. Not acceptable toward physics major or minor. Applicable to the BG Perspective (general education) natural sciences requirement.

PHYS 1010(3)
Basic Physics
Spring. Laboratory course for non-science majors. Emphasis on scientific data analysis and the meaning of scientific knowledge. Not acceptable toward physics major or minor. Two lectures and one two-hour laboratory. Applicable to the BG Perspective (general education) natural sciences requirement. Extra fee.

PHYS 1800(1 - 3)
Selected Topics in Physics
On demand. Selected topics not included in existing courses at the introductory level. Scheduling of course may be initiated by staff or students. May be repeated as different subjects are offered. Prerequisite: consent of instructor.

PHYS 2010(5)
College Physics I
Fall, Spring, Summer. First term of an introductory physics sequence using algebra and trigonometry, but not calculus. Topics include motion, forces, energy, fluids, heat and simple harmonic motion. Four lecture-recitations and one two-hour laboratory. Prerequisite: satisfactory score on the math placement exam or a grade of C or higher in MATH 1120 or in MATH 1200 or above. Applicable to the BG Perspective (general education) natural sciences requirement. Extra fee.

PHYS 2020(5)
College Physics II
Fall, Spring, Summer. PHYS 2010 continued. Wave motion, sound, electricity, magnetism, electrical measurements, optics; atomic, nuclear and solid-state physics. Four lecture-recitations and one two-hour laboratory. Prerequisite: PHYS 2010. Applicable to the BG Perspective (general education) natural sciences requirement. Extra fee.

PHYS 2110(5)
University Physics I
Fall. Introductory calculus-based physics sequence for science and engineering majors. Kinematics in one, two and three dimensions; Newtonian mechanics; gravitation; heat and thermodynamics. Four lecture-recitations and one two-hour laboratory. Corequisite: MATH 1310. Applicable to the BG Perspective (general education) natural sciences requirement. Extra fee.

PHYS 2120(5)
University Physics II

PHYS 2700(1 - 3)
Independent Study
On demand. Introduction to research in physics and astronomy; projects chosen in consultation with adviser. May include library and laboratory work. For lower-division students only. Prerequisite: consent of instructor. May be repeated.

PHYS 3010(3)
Modern Physics
Fall. Topics from relativity; quantum physics; nuclear, atomic and molecular physics; thermal physics, including energy and the second law. Three lecture-recitations. Prerequisites: PHYS 2120; or PHYS 2020 and MATH 2320. Corequisite: PHYS 3110.

PHYS 3020(3)
Thermal Physics and Optics
Spring. Introduction to thermal physics, including engines and refrigerators, chemical thermodynamics, and classical and quantum statistics. Introduction to optics, including waves, electromagnetic theory, propagation of light, geometrical optics, polarization, interference, diffraction, and Fourier optics. Three lecture-recitations. Prerequisite: PHYS 3010. Corequisite: PHYS 3120.

PHYS 3030(3)
Electronics
Spring. Discussion and laboratory practice in networks, transistors, integrated circuits and associated circuitry. Two lecture-recitations and one three-hour laboratory. Prerequisite: PHYS 2020 or PHYS 2120. Extra fee.

PHYS 3070(3)
Mechanics and Wave Motion

PHYS 3090(3)
Atomic and Nuclear Physics
Fall alternate years. Phenomenological basis of our understanding of atomic phenomena, fundamental ideas of atomic structure, structure of nuclei and basic decay processes, elementary particles. Three lecture-recitations. Prerequisite: PHYS 3010.

PHYS 3110(1)
Modern Physics Laboratory
Fall. Laboratory work designed to accompany material presented in PHYS 3010. One three-hour laboratory. Prerequisite: PHYS 2120; or PHYS 2020 and MATH 2320. Corequisite: PHYS 3010. Extra fee.

PHYS 3120(1)
Thermal Physics and Optics Laboratory
Spring. Laboratory work designed to accompany material presented in PHYS 3020. One three-hour laboratory. Corequisite: PHYS 3020. Extra fee.

PHYS 3170(1)
Wave Laboratory
Spring alternate years. Laboratory work designed to accompany material presented in PHYS 3070. One three-hour laboratory. Prerequisites: PHYS 2120; or PHYS 2020 and MATH 2320. Corequisite: PHYS 3070. Extra fee.

PHYS 3210(2)
Recent Progress in Astronomy
Spring alternate years. Current topics in astronomy, which may include solar system exploration, extrasolar planets, pulsars, gravitational collapse and black holes, galaxies, large-scale structure in the universe, active galaxies and quasars, and cosmology. Prerequisites: PHYS 2020 or PHYS 2120; ASTR 2010. Not open to students with credit for ASTR 3210.

PHYS 3500(3)
Musical Acoustics
Spring alternate years. Nature of vibration; sound waves, sources of musical sounds-strings, air columns, percussion and noise; acoustics of rooms; recording, reproduction and synthesis of sound. Not open to students majoring in physical sciences.

PHYS 3600(3)
Environmental Physics
Spring alternate years. Applications of physics concepts to problems in the natural world. Topics such as greenhouse effect, acid rain, ozone depletion, electromagnetic fields, solar power, nuclear energy and radiation are examined from both environmental and scientific perspectives. Prerequisites: junior standing and ENVS 1010 or consent of instructor. Not acceptable toward physics major or minor in Arts and Sciences.

PHYS 3950(1 - 3)
Workshop on Current Topics
On demand. May be repeated to six hours. Special topics in physics or astronomy of current or unique interest to students. Does not apply to first 22 hours of minor or first 32 hours of major.

PHYS 4000(1 - 3)
Selected Topics in Physics
On demand. Selected topics not included in existing courses. Scheduling of course may be initiated by department staff or by students. May be repeated as different subjects are offered. Prerequisite: consent of instructor.

PHYS 4010(3)
Methods of Mathematical and Computational Physics I
Fall. Survey of basic methods of mathematical techniques applied to physics, including linear algebra, ordinary differential equations and vector calculus with emphasis on how these concepts are used in physics. Parallel development is given to numerical methods used to solve physical problems. Use of an appropriate scientific programming language is included. Three lecture-recitations. Prerequisites: PHYS 2120; or PHYS 2020 and MATH 2320.

PHYS 4020(3)
Methods of Mathematical and Computational Physics II
Spring alternate years. Survey of mathematical and computational techniques for solving partial differential equations, including the wave equation, Poisson’s equation and the heat equation. Introduction to the Fourier analysis with applications and the Fast Fourier Transform algorithms and their implementation. A rudimentary treatment of special functions, as they arise in solving physical problems, will be given. Prerequisite: PHYS
PHYS 4030(3)
Stellar Structure and Evolution
Spring alternate years. Basic data, stellar interiors, theoretical models; advanced evolutionary states: red giants, white dwarfs, neutron stars, supernovas, black holes. Prerequisites: PHYS 3010 and consent of instructor. Not open to students with credit for ASTR 4030.

PHYS 4100(3)
Solid State Physics

PHYS 4160(3)
Classical Mechanics

PHYS 4170(3)
Quantum Mechanics
Spring alternate years. Duality of matter and radiation, state functions and interpretation. Heisenberg uncertainty principle, wave equations and principles of wave mechanics, elementary applications of Schroedinger’s equation, operator methods and approximation techniques. Prerequisites: PHYS 3010, PHYS 4010.

PHYS 4180(3)
Electricity and Magnetism
Fall alternate years. Electric and magnetic fields; Maxwell’s theory of electromagnetic field with applications in propagation, absorption, reflection, transmission of radiation. Prerequisite: MATH 2330. Corequisite: PHYS 4010.

PHYS 4290(1 - 3)
Selected Topics in Microelectronics
On demand. An individual, in-depth study of a microelectronic project. Designed to integrate the introductory knowledge gained in PHYS 3030 into a complete microelectronic system. Arranged. Prerequisite: PHYS 3030. May be repeated. Extra fee.

PHYS 4330(3)
Philosophy and Physics of Space and Time
Spring alternate years. Physical theories of space and time from philosophical, scientific and historical points of view. Topics include Zeno’s paradoxes, Greek concepts of space and time, classical Newtonian world view, general ideas of modern theory of relativity and cosmology. Course presupposes high school-level mathematics only. Cross-disciplinary; cross-listed as PHIL 4330. Prerequisite: three hours in PHIL; three hours in either PHIL, MATH, or PHYS; or consent of instructor.

PHYS 4700(1 - 3)
Independent Study
On demand. Introduction to research in physics and astronomy; projects chosen in consultation with adviser, may include library and laboratory work. Prerequisite: consent of instructor. May be repeated.

PHYS 4900(1 - 3)
Special Problems in Physics
On demand. Readings and research on recently developing topics chosen to fit needs of students. May be repeated.

Subject: Political Science

POLS 1100(3)
American Government: Processes and Structure
Fall, Spring, Summer. Constitutional basis and development, political processes (parties, nominations and elections, interest groups and public opinion), federalism and institutions of national government. Applicable to the BG Perspective (general education) social sciences requirement.

POLS 1710(3)
Introduction to Comparative Government
Fall, Spring, Summer. Basic concepts, approaches to and comparisons of different political systems, including political cultures, participation, interest groups and public opinion, federalism and institutions of national government. Applicable to the BG Perspective (general education) social sciences requirement.

POLS 1720(3)
Introduction to International Relations
Fall, Spring, Summer. Historical and contemporary overview of the modern international system; governmental and nongovernmental actors influencing international relations; major issues of the post-cold-war period. Applicable to the BG Perspective (general education) social sciences and international perspective requirements.

POLS 2900(3)
Introduction to Political Inquiry
Fall, Spring. Concepts and theories used by political scientists; traditional and behavioral political science; how political scientists establish and evaluate concepts and theories. Required of all majors; should be taken by the end of the junior year. Nonmajors must receive permission of instructor.

POLS 3010(3)
Modern Political Ideologies
Spring. Nature of political power, freedom, authority and terrorism as seen in ideologies of democracy, capitalism, liberalism, conservatism, communism, anarchism, socialism and fascism. Applicable to the BG Perspective (general education) social sciences and international perspective requirements.
POLS 3020(3)  
American Domestic Public Policy  
Description and analysis of environment, education, defense, civil rights, criminal justice, health, welfare and other selected contemporary policy areas and issues.

POLS 3030(3)  
Introduction to Public Administration  
Fall, Spring, Summer. American administrative system: emphasis on administrative structures and processes; relationship between elected offices and bureaucracy, notion of civil service, modes of managing administrative system. Prerequisite: POLS 1100.

POLS 3040(3)  
American Political Thought  
As reflected in colonial, Federalist, Civil War and late 19th century political thought.

POLS 3110(3)  
State and Local Government  
Fall, Spring. Influence of culture and socioeconomic factors on state and local politics; state constitutions, municipal corporations and charters; political participation; institutions and processes; intergovernmental relations; policy issues and outcomes in state/local government with special reference to Ohio.

POLS 3350(3)  
Global Resource Politics  
Spring. Resource-related global political problems dealing primarily with energy and food questions for policymakers and citizens concerned with political determinants of energy and food security in an interdependent world. Applicable to the BG Perspective (general education) social sciences requirement.

POLS 3360(3)  
Environmental Politics and Policies  
Environmental policy process primarily in the U.S. including agenda setting, formulation, adoption, implementation and evaluation. Political interests, governmental institutions and actors involved in environmental policy making. Focus on key environmental issues and policies.

POLS 3410(3)  
Public Opinion  
Processes of opinion formation and change, political attitudes, belief systems, socialization and the operation of public opinion processes in democracy; models of linkages between public opinion and public policies.

POLS 3450(3)  
Legislative Process  
Spring. Legislative behavior and decision making; forces involved in formation of public policy; proposed reforms of Congress. Prerequisite: POLS 1100 or consent of instructor.

POLS 3460(3)  
Presidency and Executive Process  
Fall. Organization, functions and powers of office of president and vice president; roles and presidential leadership psychology.

POLS 3470(3)  
Judicial Process  
American judiciary, particularly Supreme Court, as political institution; decision-making process and interaction of courts with rest of political system.

POLS 3510(3)  
Western European Politics  
Fall. Political systems and major policy problems of selected European countries. Political culture, governmental structures, political parties and interest-group roles in policy development. Prerequisite: POLS 1710 or permission of instructor. Applicable to the BG Perspective (general education) social sciences and international perspective requirements.

POLS 3530(3)  
Canadian Government and Politics  
Spring. Origins and development of Canadian national political institutions and processes. Political culture, domestic and foreign policies, and political conflicts including Quebec nationalism, western alienation, and multiculturalism.

POLS 3550(3)  
Governments and Politics of Latin America  
Fall. Influence of cultural and socio-economic factors on politics; violence and revolution; role of major interest groups such as the military, labor, the Catholic Church; political parties and elections; institutions; focus on selected nation-states.

POLS 3610(3)  
Governments and Politics of Middle East  
Governmental and political processes of Turkey, Iran, Israel, Egypt, other selected Middle Eastern and North African political systems; major developmental problems of the area.

POLS 3660(3)  
Governments and Politics of Asia  
Representative contemporary Far Eastern and Southeast Asian political systems; how ideology, religion, militarism and other social forces (both endogenous and exogenous) have influenced the development of these policies.

POLS 3720(3)  
Contemporary World Politics  
Spring. Current global issues and problems such as the arms race, population control, disarmament and East-West, North-South rivalries are discussed and analyzed. Applicable to the BG Perspective (general education) social sciences and international perspective requirements.
education) social sciences and international perspective requirements. Approved for Distance Ed.

POLS 3740(3)
American Foreign Policy Process
Fall. Nature and conduct of contemporary U.S. foreign policy, with particular emphasis on the roles that the executive and legislative branches play in the process. Secondary foci of analysis are how domestic political problems, interest groups, military alliances, technological and economic forces help shape foreign policy formation and articulation.

POLS 4000(1 - 3)
Topics in Political Science
Fall, Spring. Subject matter varies. New, one-time courses being offered experimentally. See schedule for listing. Prior completion of POLS 1100 recommended. May be repeated.

POLS 4020(3)
Western Political Thought I
Classics of political philosophy of ancient and medieval periods. Major ideas and concepts of western political tradition from Plato through Middle Ages to Machiavelli. Applicable to the BG Perspective (general education) social sciences requirement.

POLS 4030(3)
Western Political Thought II
Classics of political philosophy of modern period. Major ideas and concepts of Western political tradition from Hobbes to Marx. Applicable to the BG Perspective (general education) social sciences requirement.

POLS 4040(3)
20th Century Political Thought
Contemporary classics of political philosophy. Theories of justice and right of Rawls, Nozick, Hayek and Strauss; Berlin's pluralism; existentialism; and/or democratic theory.

POLS 4160(3)
Constitutional Law: Powers and Relationships
Fall. Supreme Court cases relating to U.S. governmental structure, powers and relationships.

POLS 4170(3)
Constitution Law: Procedural Rights
Due process, right to counsel, search and seizure, electronic surveillance and jury trial.

POLS 4180(3)
Constitution Law: Substantive Rights
Spring. Freedom of speech, press and religion; equal protection of law, travel and privacy, and right to vote.

POLS 4190(3)
Jurisprudence
Leading theories and theorists of law; Anglo-American thought and practice.

POLS 4200(3)
Administrative Law
Fall. Legal aspects of the administrative process and the effect of legal principles and processes upon administrative decision making. Emphasis on the limitation of administrative discretion and the judicial review of administrative decisions. Prerequisite: consent of instructor.

POLS 4210(3)
Bureaucratic Politics
The role federal bureaucracy plays in public policy process. Policy development; social and political factors that influence the administrative branch of government. Prerequisite: POLS 3030 or permission of instructor.

POLS 4220(3)
Comparative Public Administration
Comparative study of administrative structures and processes in selected modern and modernizing political systems. Analysis includes the consideration of cultural, legal and political factors influencing the operation of bureaucratic institutions, developmental goals, and the methods of establishing and administering programs of social, economic and political development. Approved for Distance Education.

POLS 4240(3)
Supreme Court and Contemporary Issues
Selected areas of current concern in constitutional law; substantive knowledge of relevant case law, scholarly legal journals which attempt to predict outcome of future constitutional litigation. Prerequisite: POLS 4170 or POLS 4180.

POLS 4250(3)
Constitutional Law Advocacy
Substantive knowledge of one area in constitutional law; practical skills necessary for constitutional adjudication; techniques of legal research, writing appellate court briefs and appellate court advocacy. Prerequisites: POLS 4160 and POLS 4170, or POLS 4180 and permission of instructor.

POLS 4300(3)
Local Government Management and Politics
Socio-economic and political factors affecting local governments with an emphasis on governmental structure, problems, and administrative mechanisms, intergovernmental relations, service delivery, performance measures, and alternatives for improving governmental policy and management. Prerequisites: POLS 3030 or permission of instructor.

POLS 4400(3)
Political Parties and Voter Behavior
Democracy and political parties, party organization, primaries and conventions for nomination, campaigns and elections, patterns of election participation and factors affecting the voter's decision making.

POLS 4430(3)
Politics and the Mass Media
Political analysis of relationships between the media and the government and the effects on public policy issues and electoral campaigns.

POLS 4540(3)
Politics of Post-Communist States
Analysis of institutions, parties, and economic policies of the former Soviet republics and East European nations within the context of ethnic conflicts, transitions to democracy, and market-capitalism.

POLS 4590(3)
Intergovernmental Relations
Vertical and horizontal relations among governments in the American federal system, models and theories of federalism and intergovernmental relations (IGR), constitutional issues, twentieth-century changes, recent developments in financing and managing federalism and IGR. Prerequisite: POLS 3030 or permission of instructor.

POLS 4600(3)
Politics and Issues of World Development
Spring alternate years. Political and economic modernization problems; equity versus development; hunger and population; foreign aid, technology transfer and other selected topics.

POLS 4700(1 - 3)
Individual Readings
Fall, Spring. Supervised individual readings to meet student’s need for extended reading in familiar areas or for exploration in fields not covered by courses. Prerequisite: consent of supervising instructor. May be repeated to nine hours.

POLS 4730(3)
International Law
Alternate Spring. History, nature, sources and applications; relationship between law and society at international level.

POLS 4750(3)
International Organization
Alternate Spring. History, organization and function of international organizations within the context of world politics. Major emphasis on United Nations and issues facing it. Prior completion of POLS 1720 or POLS 3720 recommended.

POLS 4760(3)
International Political Economy
Fall. Survey and analysis of political economy on a global scale, including review of major Marxist, realist and liberal theories and policy issues of trade, debt, investment and aid.

POLS 4780(3)
International Conflict
Political theories and research on the causes of war and other forms of international conflict. Analysis of escalatory processes, ethics of warfare, techniques of conflict resolution.

POLS 4790(3)
Conflict Resolution
Fall (alternate years). Theories and research on the resolution of political conflicts in individual, bureaucratic, societal, and interstate settings. Techniques of conflict resolution including coercion, negotiation, and nonviolence. Application of theories to cases of political conflict.

POLS 4910(3)
Seminar for Intern
Suggested for students planning internships. Survey and analysis of literature dealing with practice political experiences. Use of biographical material as sources.

POLS 4920(1 - 3)
Field Study
Fall, Spring, Summer. For students working on political internship programs and political campaigns. May be repeated to six hours.

POLS 4950(1 - 8)
Honors Seminar in Contemporary Political Science
On demand. Political science as discipline and profession; forms of political inquiry and research; scientific and methodological orientations toward values and scholarship; public and professional status of political science. Prerequisite: permission of honors committee. May be repeated to eight hours.

POLS 4960(1 - 4)
Workshop on Current Topics
On demand. Intensive educational experience on selected topics in political science. May be repeated if topics differ, on approval of adviser. No more than nine hours of POLS 4960 (formerly POLS 395) will count toward a major or minor in political science.

Subject: Popular Culture
POPC 1600(3)
Introduction to Popular Culture
Fall, Spring, Summer. Basic theories and approaches to the scholarly study of popular culture, including various media, folklore, and everyday life. Applicable to the BG Perspective (general education) humanities and arts requirement.

POPC 1650(3)
Popular Culture and Media
Fall, Spring, Summer. Some of the ways in which mass media (TV, film, recording industry, print, radio) have affected modern American culture. Media relationships and interactions. Applicable to the BG Perspective (general education) humanities and arts requirement.
POPC 1700(3)
Black Popular Culture
Fall, Spring, Summer. Basic theories of approaches to 20th century African-American popular culture. Traces ways black popular culture has shaped and is shaped by American society. Examines relationship of race, ethnicity, gender and class. Applicable to the BG Perspective (general education) cultural diversity in the United States requirement.

POPC 2200(3)
Introduction to Folklore and Folklife
Fall, Spring. Study and collecting of folklore; ballads, myths, tall tales, heroes, folk medicines, superstitions, proverbs and crafts. Applicable to the BG Perspective (general education) humanities and arts requirement.

POPC 2310(1 - 3)
Studies in Popular Culture
Study of theme, era or issue in popular culture. Subject matter designated in class schedule. May be repeated once if topics differ.

POPC 2500(3)
Introduction to Popular Film
Fall, Spring, Summer. Popular film as mass entertainment medium; Hollywood studios, popular film formulae, genres, relationships between popular films and movie-going audience; viewing of appropriate films. Extra fee.

POPC 2600(3)
Popular Culture Research
Fall or Spring. Examines different methods of popular culture research and theories on which they are based. Application of course concepts to contemporary issues of popular culture. Prerequisites: major or minor in POPC and POPC 1600 or POPC 1650. Required for majors and minors.

POPC 2700(3)
Introduction to Contemporary Popular Literature
Alternate years. Popular literary formulae, publishing industry, relationship between popular literature and reading public, functions of popular literature in society.

POPC 2800(3)
Introduction to Popular Music
Fall or Spring. Relationship between music world and listening-viewing audience; musical styles, trends in popular music, popular performers and entertainers and what they reveal about popular culture; appropriate music listening.

POPC 2900(3)
Television as Popular Culture
Fall or Spring. Relationship between popular television programming and American society; viewing of appropriate television.

POPC 3000(3)
Topics in International/Global Popular Culture
On demand. In-depth study of international and/or global aspects of everyday life and popular culture: consumer culture, mass media, entertainment, migration, technology, etc. Areas may include Ireland, China, Taiwan, Japan, and Canada. May be repeated to nine hours if topics differ.

POPC 3200(3)
Folktale and Legend
Alternate years. Intensive examination and collecting of oral narratives; theory and methods of collecting, organizing, and interpreting such material as folktales, urban belief tales, supernatural legends, narrative jokes, tall tales, etc.; analysis of folk mythology.

POPC 3210(3)
Folklife and Material Culture
Alternate years. Study and analysis of nonverbal folklife; theory and methods of analysis of such forms of expressive folk culture as arts, crafts, architecture, foodways, festivals, customs and folk rituals; emphasis on modes of description and analysis commonly used by folklorists to understand and explain such materials.

POPC 3250(3)
The Folk Group/Folk Region
Alternate years. Intensive study of a single folk group or the folklore of a specific region (e.g., Women's Folk Culture, Folklore of the Great Lakes Region, etc.). Emphasis on the function of various types of folklore within the group or region. May be repeated once if content clearly differs.

POPC 3500(3)
Advanced Studies in Popular Film
Fall or Spring. In-depth study of particular aspect of popular film. Topics may focus on a single genre, director, historical period, or studio. Appropriate films will be viewed. May be repeated three times if topics differ. Two-hour lecture, two-hour lab. Extra fee.

POPC 3650(3)
Youth and Popular Culture
Spring. Alternate years. History, theory, and perceptions of youth cultures and subcultures. Young peoples' distinctive roles as audience, producers, and consumers of popular cultures. Topics may include comparative youth cultures, music, new media, fashion, and everyday life. No prerequisite.

POPC 3700(3)
History of Popular Literature
Alternate years. Detective, science fiction, western, mystery, best sellers, poetry, magazine fiction. Prerequisite: any 2000-level literature course or permission of instructor.

POPC 3800(3)
Contexts of Popular Music
Alternate years. In-depth investigation into single aspect of popular music: specific popular music genres, specific musical themes, popular music industry, etc. May be repeated to nine hours if topics differ. Prerequisite: POPC 2800.

POPC 3950(1 - 3)
Workshop on Current Topics
Intensive educational experience on selected topics. Typically, an all-day or similar concentrated time format. Requirements usually completed within expanded time format. May be repeated if topics differ, on approval of adviser.

POPC 4240(3)
Topics In Folklore Genres
Alternate years. Intensive study and collecting of a single folk genre or distinctive type of folk materials (e.g., American Folk Music, Ethnic Foodways in America, The Urban Belief Tale, etc.). Emphasis on theory and method of collection and analysis. May be repeated once if content clearly differs.

POPC 4260(3)
Popular Entertainments
Spring, alternate years. Cultural theories applied to popular entertainment, leisure activities, and events, past and present, such as amusement parks, concerts, fandom, the internet, and nightlife.

POPC 4600(3)
Popular Culture Advanced Studies
In-depth study of particular problem: development of hero in popular arts, cultural analysis of popular film, cultural analysis of popular music, etc. May be repeated once if subject matter is different.

POPC 4700(3)
Studies In Popular Literature
In-depth study of a particular aspect of popular literature such as by genre (horror, science fiction, comic books, romance), author, or historical period. May be repeated once if topics clearly differ. Prerequisite: any 2000-level literature course or permission of instructor.

POPC 4800(3)
Senior Seminar Popular Culture
Fall. Seminar for seniors in POPC program. Selected topics approached from several points of view. Prerequisites: senior standing and major or minor in POPC, junior standing with permission of department.

POPC 4850(2)
Fieldwork in Folklore Studies
Supervised independent collecting project intended as a senior seminar. Advanced students, under close supervision of one or more faculty, develop and carry out intensive exercise in collecting a specific form of folk material. POPC 4800 may be substituted when appropriate.

POPC 4900(1 - 3)
Problems in Popular Culture
For advanced student. Independent study. Prerequisites: six hours of POPC courses and consent of department chair and instructor by 12th week of semester preceding the term in which the course is to be taken. May be repeated to eight hours.

Subject: Psychology
PSYC 1010(4)
General Psychology
Fall, Spring, Summer. Scientific approaches to the study of behavior of organisms. Application to personal and social behavior. Applicable to the BG Perspective (general education) social sciences requirement.

PSYC 2400(1 - 3)
General Seminar
Fall, Spring. Specific content areas offered depends on demand and interest of staff. May be repeated twice. Prerequisite: consent of instructor.

PSYC 2700(4)
Quantitative Methods I
Fall, Spring, Summer. Principles of measurement. Quantitative analyses of behavioral measures, including measures of typicality, individual differences, correlational methods and tests of significance. Three lecture hours; two laboratory hours. Prerequisites: PSYC 1010 and MATH 1200 or MATH 1220 (or their equivalents) or consent of instructor.

PSYC 2800(4)
Introduction to Laboratory Methods in Psychology
Introduction to research methods used in laboratory and natural settings. Includes planning the research, collecting and interpreting the data and communicating the results in both informal verbal and formal written forms. Three lecture hours; two laboratory hours. Prerequisites: PSYC 1010, PSYC 2700.

PSYC 3020(3)
Introduction to Cognitive Science: Minds and Brains
Fall, Spring. Introduction to the study of higher mental processes. The course highlights the wide range of topics covered in the field, including memory, perception, language, learning, and thinking. It also introduces approaches to these issues, including experimental psychology, cognitive neuroscience, and computer modeling. Prerequisite: PSYC 1010 or permission of instructor.

PSYC 3030(3)
Psychology of Child Development
Fall, Spring. Major concepts, theories and principles of child development. Coverage is from conception until adolescence. Prerequisite: PSYC 1010.

PSYC 3040(3)
Psychology of Adolescent Development
On demand. Major concepts, theories and principles of adolescent development. Prerequisite: PSYC 1010.
PSYC 3050(2)
Psychology of Personality Adjustment
Problems of personal adjustment. Related problems of theory and measurement of personality. Prerequisite: PSYC 1010.

PSYC 3060(3)
Psychology of Gender
Psychological characteristics of women and men: personality, adjustment, identity formation, intellectual processes, sexuality; theories and data on gender development. Credit allowed only for one of PSYC 3060 or WS 3060.

PSYC 3070(3)
Human Sexuality
Fall, Spring. Survey of the relationship of biological, psychological, cultural and historical factors to typical and atypical sexual attitudes and behaviors. Prerequisite: PSYC 1010, SOC 1010 or BIOL 1040.

PSYC 3080(3)
Introduction to Clinical Psychology
Models and roles associated with delivery of mental health services; major conceptions of psychological assessment and treatment. Prerequisite: PSYC 1010.

PSYC 3090(3)
Psychology of Adult Development and Aging
Discussion of major theories of adult development; description of how biological, cognitive, personality, and social-psychological processes interact to produce development; emphasis on seeing how these processes occur in adults' everyday lives. Prerequisite: PSYC 1010.

PSYC 3100(3)
Lifespan Developmental Psychology
Fall. Research and theories of human development across the entire lifespan. Discussion of how biological, cognitive, and social processes affect human development from conception to death. Prerequisite: PSYC 1010.

PSYC 3110(3)
Social Psychology
Fall, Spring, Summer. Social behavior covering theoretical issues and recent empirical findings: social influence and conformity processes, attitudes and attitude change, interpersonal attraction, social perception, group processes, sexual behavior, environmental influences on social behavior. Prerequisite: PSYC 1010.

PSYC 3130(4)
Research in Social Psychology
Field and laboratory research techniques in social psychology, attitude change, conformity, attraction, environmental effects on social behavior, aggression, group processes. Three lecture hours; two laboratory hours. This course can be applied toward satisfying the laboratory requirement of the psychology major. Prerequisites: PSYC 2700, PSYC 2900, PSYC 3110.

PSYC 3200(4)
Conditioning
Classical conditioning and instrumental learning from empirical and theoretical point of view. Three lecture hours; two laboratory hours. This course can be applied toward satisfying the laboratory requirement of the psychology major. Prerequisites: PSYC 2700, PSYC 2900. PSYC 3020 or PSYC 3300 is strongly recommended.

PSYC 3210(4)
Cognitive Psychology I: Learning and Memory
Principles and theories of human learning and memory, applied to the acquisition of knowledge and skills. Three lecture hours; two laboratory hours. This course can be applied toward satisfying the laboratory requirement of the psychology major. Prerequisites: PSYC 2700, PSYC 2900. PSYC 3020 is strongly recommended.

PSYC 3220(4)
Cognitive Psychology II: Thinking and Problem Solving
Theory and research on the nature of human thinking, problem solving, reasoning, concept formation, and language. Three lecture hours; two laboratory hours. This course can be applied toward satisfying the laboratory requirement of the psychology major. Prerequisites: PSYC 2700, PSYC 2900. PSYC 3020 is strongly recommended.

PSYC 3280(4)
Psychophysiology
Fall, Spring. Laboratory course in psychophysiology; relationship between psychological states and physiological responses in humans; conditioning of autonomic responses, orienting responses, psychosomatic relationships and biofeedback, detection of deception. Four lecture hours, laboratory by arrangement. This course can be applied toward satisfying the laboratory requirement of the psychology major. Prerequisites: PSYC 2700, PSYC 2900. BIOL 3040 or BIOL 2050 is strongly recommended. Extra fee.

PSYC 3290(4)
Laboratory in Developmental Psychology
Practical research methods in developmental psychology and their application to selected problems in the development of humans. Three lecture hours; two laboratory hours. This course can be applied toward satisfying the laboratory requirement of the psychology major. Prerequisites: PSYC 2700 and PSYC 2900, and one of PSYC 3030, PSYC 3040, PSYC 3090, or PSYC 3100.

PSYC 3300(3)
Introduction to Neuroscience
Fall. Survey of modern views of the brain and exploration of the relationship between brain, behavior and the mind. Course examines how brain works and its role in understanding psychology. No prerequisite. Credit not allowed for both PSYC 3300 and BIOL 3300.

PSYC 3310(3)
Psychopharmacology and Clinical Neuroscience
Examines relationship between brain chemistry and drugs. Emphasis on interaction of drugs with the brain, how drugs are used in treatment of psychological disorders and drug abuse. Prerequisite: PSYC 1010 or consent of
instructor. PSYC 3300 strongly recommended.

PSYC 3320(4)
Neuroscience of Emotions and Motivations
Biological causes of motivated behaviors such as sleep, hunger, thirst, fear, aggression, and sexual behavior; how motivated behaviors and related emotional states are organized in brain, as elucidated by electrical and chemical stimulation and ablation of living brain. Three lecture hours, two laboratory hours. This course can be applied toward satisfying the laboratory requirement of the psychology major. Prerequisites: PSYC 2700 and PSYC 2900, or consent of instructor. PSYC 3300 strongly recommended but not required.

PSYC 3330(4)
Cognitive Neuroscience
Brief review of basic neuroscience principles followed by examination of relationship between brain mechanisms and complex cognitive functions such as learning and memory, language, spatial maps, and problem solving. Three lecture hours; two laboratory hours. This course can be applied toward satisfying the laboratory requirement of the psychology major. Prerequisites: PSYC 1010, PSYC 2700 and PSYC 2900, or consent of instructor. PSYC 3300 strongly recommended but not required. Extra fee.

PSYC 3340(3)
Behavioral and Neural Genetics
The importance of genes and environment in behavioral actions has been debated for many years. Course examines relationship between heredity and behavior with particular interest in the role of the brain. Prerequisite: PSYC 1010 or consent of instructor. PSYC 3300 strongly recommended.

PSYC 3350(3)
Psychoneuroendocrinology
The importance of hormones in controlling behavioral and psychological tendencies has been discussed for many years. Course examines relationship between the major hormonal secretions of the body and consequences for psychobehavioral integration. Prerequisite: PSYC 1010 or consent of instructor. PSYC 3300 strongly recommended.

PSYC 3500(3)
Survey of Industrial and Organizational Psychology
Broad-based survey of the various content areas of industrial (e.g., selection, appraisal) and organizational (e.g., motivation, leadership) psychology. Underlying psychological principles that influence human behavior in the workplace are discussed.

PSYC 3520(3)
Quality of Work Life
Impact of organizational environments on individuals and individual behavior. Topics include job design, leadership, organizational climate, job satisfaction and work motivation. Prerequisite: PSYC 2700 or consent of instructor.

PSYC 3580(4)
Psychology of the Workplace
Laboratory course in Industrial-Organizational psychology. Topics may include job analysis, employee selection, job attitudes, and job stress. Three lecture hours; two laboratory hours. This course can be applied toward satisfying the laboratory requirement of the psychology major. Prerequisites: PSYC 2700 and PSYC 2900. PSYC 3500 is strongly recommended.

PSYC 3600(3)
Psychology of Language
Fall, Spring. The course introduces the wide range of abilities involved in knowing and using language, and considers spoken and signed languages (like ASL) and animal communication. Topics include development, comprehension and production in both normal and disrupted cases, and breakdown. Prerequisite: Permission of the instructor or one of the following: PSYC 1010, CDIS 2240, CDIS 2250, ENG 2900 or ENG 3800.

PSYC 3700(4)
Quantitative Methods II
On demand. Analysis of variance and other multivariate methods for analyzing behavioral measurements. This course cannot be applied toward satisfying the laboratory requirement of the psychology major. Prerequisite: PSYC 2700.

PSYC 3810(4)
Sensation and Perception
Historical introduction to sensory and cognitive processes that underlie our experience of objects, events, and their relationships. Emphasis on visual and auditory perceptual systems. Three lecture hours; two laboratory hours. This course can be applied toward satisfying the laboratory requirement of the psychology major. Prerequisites: PSYC 2700, PSYC 2900.

PSYC 3900(1 - 3)
Supervised Research in Psychology
Research on selected problems supervised by a faculty member. PSYC 3900 may be repeated up to 6 hours. Only 6 hours total of PSYC 3900 and PSYC 4900 may count toward the Psychology major. Prerequisite: PSYC 1010 and consent of instructor. Graded S/U.

PSYC 3950(1 - 5)
Workshop on Current Topics
On demand. Intensive educational experience on selected topics. Typically an all-day or similar concentrated format. Requirements usually completed within time format. May be repeated on approval of adviser.

PSYC 4030(3)
Personality Theory
Scientific constructs in personality theory; contemporary theories with historical antecedents; assessment of relationship to general psychology. Prerequisite: PSYC 1010.

PSYC 4050(3)
Psychology of Abnormal Behavior
Fall, Spring, Summer. Data and concepts used in understanding, labeling and modifying deviant behavior.
**PSYC 4060(3)**
**Developmental Psychopathology**
Major psychological disorders of childhood and adolescence: description, etiological implications, treatment issues, approaches and problems, and related research. Prerequisite: PSYC 1010 or consent of instructor.

**PSYC 4150(3)**
**Psychology of Religion and Spirituality**
Religion and spirituality from a psychological perspective. Religion and motivation, development, conversion, altruism, coping, mental health, psychotherapy. Prerequisite: PSYC 1010.

**PSYC 4400(1 - 4)**
**General Seminar**
Specific content areas offered depends on demand and interest of staff. May be repeated three times. Prerequisite: consent of instructor.

**PSYC 4520(3)**
**Personnel Selection**
Methods of selection and assessment in industrial and other organizations. Includes recruitment, hiring, promotion, etc. Compliance with fair employment and equal employment opportunity regulations. Prerequisites: PSYC 1010 and PSYC 2700 or STAT 2110 or equivalent.

**PSYC 4540(3)**
**Interviewing**
Laboratory exercises in administering and responding to interviews differing in structure, behavior, decisions and interrelationships within interviews, validity and reduction of bias. Prerequisite: PSYC 1010.

**PSYC 4550(3)**
**Stress Factors of Work**
Sources and effects of psychological stress at work and research on stress reduction. Topics include perceived work loads, role demands and ambiguities, job involvement and career stresses such as those in dual-career families. Prerequisite: PSYC 1010.

**PSYC 4600(3)**
**Introduction to Psychological Testing**
Theory and methods of measuring human behavior. Basic measurement principles and applications; representative standardized tests of intelligence, interest, aptitude and personality. Prerequisites: PSYC 1010 and PSYC 2700 or equivalent.

**PSYC 4890(1 - 3)**
**Internship**
Fall, Spring, Summer. Supervised field experience in an applied psychology setting. Credit not applicable to psychology major or minor. May be repeated to six hours. Prerequisite: junior standing and departmental permission. Graded S/U.

**PSYC 4900(1 - 3)**
**Independent Research in Psychology**
Independent research in collaboration with a faculty member. Students who take PSYC 4900 are encouraged to present the results of their research at a local, regional, or national venue upon completion. PSYC 3900 and PSYC 4900 may be repeated up to a total of 12 hours. Only 6 hours total of PSYC 3900 and PSYC 4900 may count toward the Psychology major. Prerequisites: 10 hours of psychology and consent of instructor. Graded S/U.

**PSYC 4950H(3)**
**Senior Honors Seminar**
Fall. Seminar in general psychology for senior major. Student required to plan and carry out research project under direction of faculty member. Prerequisite: senior major, approval by department undergraduate committee.

**PSYC 4960H(3)**
**Senior Honors Seminar**
Spring. Seminar in general psychology for senior major. Student required to plan and carry out research project under direction of faculty member. Prerequisite: senior major, approval by department undergraduate committee.

### Subject: Public Health

**PUBH 2100(3)**
**Introduction to Community Health**
This course explores the determinants of health that affect communities and the people living in them; how resources are obtained; and how they impact and are influenced by health programs and policies at the local, state, federal, and international levels. No prerequisite.

**PUBH 3010(3)**
**International Health**
Fall, Spring. Significant health problems affecting populations in various parts of the world. Focus on integration of disease patterns with geographic areas and cultural practices; discusses contemporary issues in international health. Applicable to the 63 Perspective (general education) social sciences and international perspective requirements. Approved for Distance Ed.

**PUBH 3020(3)**
**Applied International Health**
Summer. Examine health delivery methods and systems in various parts of the world. Focus on the application of material from PUBH 3010 with geographic area and cultural practices. Discuss contemporary issues in international health particular to the country being visited. Work on a project to improve the health delivery capability in the region being visited. May be repeated once.

**PUBH 3100(3)**
**Community Health Planning and Evaluation**
Explores the processes of planning, implementing, and assessing community health programs. Explains how to
develop mission goals and objectives; use tools to evaluate program effectiveness; modify existing programs; evaluate programs; and create new programs. Prerequisite: PUBH 2100.

PUBH 3200(3)
Introduction to Public Health
Fall, Spring, Summer. (Web-based offering in summer.) Explore social, economic, environmental and cultural influences on community health issues facing the Nation in the 21st Century. Emphasizes an interdisciplinary health team approach and innovative population-based strategies that foster and support healthier communities. No prerequisites. Graded. Applicable to the BO Perspective (general education) social sciences requirement.

PUBH 3300(3)
Research Methods in Public and Allied Health
Fall, Spring. Introduction to research methods within the context of health services. Emphasis on conceptual understanding of scientific reasoning, research design, data collection methods, analysis, interpretation, and ethical standards in research. Lecture format. Prerequisites: junior standing, MATH 1150.

PUBH 3400(3)
Introduction to Human Diseases
This course provides a basic understanding of human disease occurrence, etiology, pathophysiologic processes, progression and management with an emphasis on significant causes of death and disability in the US adult population. Prerequisite: BIOL 3320.

PUBH 3700(3)
Sexually Transmitted Diseases
Review of current scientific literature regarding HIV infection and pathobiology with emphasis on immunological aspects of infection and diseases associated with AIDS. Includes mode of transmission, prevalence, pathobiology, and treatment of other sexually transmitted diseases. Prerequisite: BIOL 2050 or permission.

PUBH 4030(3)
Issues in Global Health
Fall term. Course examines current issues and trends that affect international health, including delivery systems in other countries, and examines a variety of environmental, economic, and political factors that play a role in the transmission and treatment of human diseases. Prerequisite: PUBH 3010 or consent of instructor. Students who complete this course may not receive credit for PUBH 5030.

PUBH 4800(1 - 4)
Seminar in Public Health
On demand. Systematic study of selected topics in public health. May be repeated if topics differ. Prerequisite: consent of instructor.

PUBH 4810(1 - 4)
Independent Study in Public Health
On demand. Supervised independent completion of an individual or group activity or research project, other than readings, on a specialized topic related to public health. May be repeated if topics differ. Prerequisite: consent of instructor.

PUBH 4820(3)
Directed Research in Public Health
On demand. Individualized instruction in research for selected areas or topics in public health. May be repeated if topics differ. Prerequisite: consent of instructor.

PUBH 4830(3)
Internship in Public Health
On demand. Supervised internship experience in public health. May be repeated if topics differ. Prerequisite: consent of instructor.

Subject: Quality Systems
QS 2650(3)
Introduction to Lean Processes/Systems
Technology of the manufacturing enterprise. Production materials and methods, manufacturing planning, organizing and controlling. Two one-hour lectures and one two-hour laboratory per week.

QS 3600(3)
Six Sigma Systems
Spring. Data-based systems for improvement including statistical process control using variable and attribute data, capability measurement analysis, and cost and other data gathering for lean and six sigma manufacturing and non-manufacturing environments. Team-based project configuring e-portfolio in ISO 9000 infrastructure. Prerequisites: ENGT 1000 or MFG 1120, STAT 2000 or higher.

QS 3650(3)
Foundations of Lean
Fall. Foundations of quality improvement systems applied for variation and waste reduction and productivity enhancement for lean six sigma manufacturing and non-manufacturing environments. Team-based project configuring e-portfolio in ISO 9000 infrastructure. Prerequisites: ENGT 1000 or MFG 1120, STAT 2000 or higher.

QS 3700(3)
Quality Change Services
Summer. Quality environment for change and improvement, emphasizing technological and cultural issues associated with servicing customers from a lean six sigma supplier perspective in both manufacturing and non-manufacturing circumstances. Team-based project configuring e-portfolio in ISO 9000 infrastructure. Prerequisites: QS 3600 and QS 3650.

QS 3800(3)
Lean Six Sigma
An overview of the dynamic relationship of lean and six sigma principles combined. Analysis of core values and tools inherent in lean and six sigma, with a key emphasis on how they have influenced production. Team-based project configuring e-portfolio in ISO 9000 infrastructure. Prerequisites: QS 3600 and QS 3650.
Synchronous Quality Planning
Summer. Planning and developing new product platform while doing existing quality responsibilities via mature lean six sigma data and documentation in manufacturing or non-manufacturing environments. Team-based project configuring e-portfolio in ISO 9000 infrastructure. Prerequisites: QS 3600 and QS 3650.

Leadership for Lean Six Sigma
Leadership focus around individual tools and techniques as foundation of continuous improvement in the lean and six sigma environment. The scientific application of common lean and six sigma tools will be applied as a transformational and improvement strategy. Team-based project configuring e-portfolio in ISO 9000 infrastructure. Prerequisites: QS 3600 and QS 3650.

Kaizen Project
Kaizen environment where time, elements of motion and flow, work measurement, machine controlled operations, plant layout, lead time, cellular organization, balancing and leveling are analyzed to create value added instructions to change movement or motion into work and reduce variation based on data collected. Team-based project configuring e-portfolio in ISO 9000 infrastructure. Prerequisites: QS 3600, QS 3650, QS 3700, QS 3800.

Subject: Radiologic Technology

Fundamentals of Radiography
An overview of the foundations in radiography and responsibilities of the radiographer. The basis of ethics, a variety of ethical issues in clinical practice, malpractice, informed consent, legal standards and scope of practice are presented. Two hours lecture.

Radiographic Procedures 1
Fall. Orientation to the clinical setting, patient care procedures, infection control, basic radiographic skills, equipment use, positioning aids, general procedural considerations for radiographic examinations, and adaptation of general procedures for specific clinical situations. Two hours lecture. Corequisites: AHTH 1100 or MEDT 3010, and AHTH 1310. Prerequisites: Admission to the program and permission of the instructor.

Radiographic Procedures Lab 1
Fall. Laboratory experience to complement the didactic portion and allow practical application of learned principles and procedures in a controlled setting directly supervised by the faculty. Three hours lab. Corequisites: RADT 1000, RADT 1010 and RADT 1110. Prerequisites: Admission to the program and permission of the instructor.

Radiographic Procedures 2
Spring. Includes evaluating radiographic orders, establishing rapport with patients in a variety of clinical circumstances, patient preparation for radiographic examinations, examination room preparation, assisting and monitoring patients. Two hours lecture. Prerequisites: RADT 1110 and RADT 1120.

Radiographic Procedures Lab 2
Spring. Laboratory experience to complement the didactic portion and allow practical application of principles and procedures learned in RADT 1110 and RADT 1210 under the direct supervision of the faculty. Includes simulation of procedures on a person or phantom in the laboratory setting. Three hours lab. Corequisite: RADT 1210. Prerequisites: RADT 1110 and RADT 1120.

Imaging and Exposure
Spring. Establishes a knowledge base in factors that govern and influence the production and recording of radiographic images. Film and electronic imaging with related accessories are presented. Computer applications related to image capture, display, storage and distribution are discussed. Demonstrations are used to supplement theory. One hour lecture. Prerequisite: RADT 1120.

Processing Methods
Introduces knowledge in processing of images, areas of consideration and functions. Standard Wet and Dry processors are discussed as well as digital processing. In depth lecture of algorithms, histograms and post processing image manipulation is included.

Radiation Physics I
Establishes a basic knowledge of atomic structure and terminology, the nature and characteristics of radiation, x-ray production and the fundamentals of photon interaction with matter. Radiographic, fluoroscopic, mobile and tomographic equipment requirements and design, and basic knowledge of quality control are also presented. Corequisite: RADT 1230.

Directed Practice
Clinical application of the knowledge and skills necessary to perform standard radiographic procedures and produce images of optimal diagnostic quality under direct supervision by the faculty. A minimum of 225 contact hours and completed competencies. Corequisites: AHTH 1020, RADT 1110 and RADT 1120. Prerequisites: Admission to the program and permission of the instructor. Grade S/U. Extra fee.

Directed Practice
Spring. Clinical application of the knowledge and skills necessary to provide instructions to patients for routine radiographic procedures, position patients for learned procedures, select and place image receptors, align the beam, and limit beam size. Adapting learned procedures for special considerations. A minimum of 225 contact hours. Corequisites: RADT 1210, RADT 1220 and RADT 1230. Prerequisites: RADT 1810 and permission of
RADT 1830(3)
Directed Practice
Clinical application of the knowledge and skills necessary to produce and evaluate images for positioning, centering, appropriate anatomy and overall image quality. Includes patient preparation necessary for various contrast studies and explaining radiographic procedures to patients/family members. A minimum of 225 contact hours and completed competencies. Prerequisites: RADT 1820 and permission of the instructor. Grade S/U. Extra fee.

RADT 2400(1)
Computers in Radiologic Sciences
Computer applications in the radiologic sciences related to image capture, display, storage and distribution are presented. Explanation of radiologic information systems, picture archiving computed systems and hospital information systems. Includes CT, Digital, PACS and DSA. Corequisite: RADT 2420.

RADT 2410(1)
Radiation Physics II
Establishes advanced knowledge of atomic structure and terminology, the nature and characteristics of radiation, x-ray production and the fundamentals of photon interactions with matter. Radiographic, fluoroscopic, mobile and tomographic equipment requirements and design, and advanced knowledge of quality control are also presented. Prerequisite: RADT 1410.

RADT 2420(2)
Radiation Biology
Fall. An overview of the principles of the interaction of radiation with living systems. Radiation effects on molecules, cells, tissues and the body as a whole are presented. Factors affecting biological response are presented, including acute and chronic effects of radiation. Two hours lecture. Corequisite: RADT 2410. Prerequisites: AHTH 1100 or MEDT 3010, and AHTH 1310.

RADT 2430(2)
Image Analysis
Fall. Provides a basis for analyzing radiographic images. Minimum imaging standards are emphasized. Problem solving techniques for image evaluation and the factors that can affect image quality are discussed. Actual and computer images will be included for analysis. Two hours lecture. Corequisite: RADT 2410. Prerequisite: RADT 1230.

RADT 2510(2)
Radiographic Pathology
Spring. Introduces theories of disease causation and the pathophysiologic disorders that compromise health systems. Etiology, pathophysiologic responses, clinical manifestations, radiographic appearance and management of alterations in body systems are presented. Includes image analysis and adaptation for pathologic conditions. Two hours lecture. Prerequisites: RADT 2420 and RADT 2430.

RADT 2520(2)
Quality Assurance
Spring. Principles and concepts of quality assurance (QA) and quality control (QC) are presented. The Center for Devices and Radiological Health program recommendations are discussed. System component parameters and basic QA/QC tests are described. Includes demonstrations and simulations. QA program design is also presented. Two hours lecture. Prerequisites: RADT 1230, RADT 2410, and RADT 2430.

RADT 2810(4)
Directed Practice
Clinical application of the knowledge and skills necessary to produce routine, special radiographic and fluoroscopic procedures. The purpose and use of contrast agents, positive and negative are presented including types, dosages and routes of administration. The general purpose and unique features resulting from special radiographic and fluoroscopic procedures are also presented. A minimum of 300 contact hours and completed competencies. Prerequisites: RADT 1830 and permission of the instructor. Grade S/U. Extra fee.

RADT 2820(4)
Directed Practice
Clinical application of the knowledge and skills necessary to produce optimal images for various routine, contrast and special radiographic procedures. Includes image analysis and adaptation of procedures to accommodate patient conditions and disease processes. A minimum of 300 contact hours and completed competencies. Prerequisites: RADT 2810 and permission of the instructor. Grade S/U. Extra fee.

RADT 2830(4)
Directed Practice
Clinical application of the knowledge and skills necessary to perform standard and special radiographic procedures. Complements the didactic portion presented in RADT 2430, RADT 2510 and RADT 2820. A minimum of 300 contact hours and completed competencies. Prerequisites: RADT 2820 and permission of the instructor. Grade S/U. Extra fee.

RADT 2900(1 - 3)
Special Topics in Radiologic Science
Special topics, current issues and new developments in Radiologic Science. Prerequisite: permission of instructor. May be repeated up to six credit hours maximum if topics vary.

Subject: Rehabilitation Counseling
REHB 4010(3)
Introduction to Rehabilitation Counseling
Characteristics and principles of the rehabilitation process; disabilities and agencies serving the disabled.

Subject: Residential Center
RESC 2000(1)
Field Experiences
Fall, Spring. Community-based field experiences tied to core courses for Arts Village and Chapman Learning Communities. Required of all Chapman first year students and required for all students participating in the Arts Village (freshmen and sophmores). Includes films, exhibits, concerts, debates, panel discussions, art
events, speakers, field trips, and community service learning. May be repeated.

RESP 4700(1 - 3)  
Independent Study  
Fall, Spring, Summer. For students who want to conduct intensive study of selected problems related to goals of Chapman Learning Community. For undergraduate credit only. Prerequisite: consent of director of Chapman Learning Community. May be repeated up to six credit hours.

Subject: Respiratory Care  
RESP 1050(2)  
Introduction to Respiratory Care  
Survey of respiratory care (RC) practice in an evolving health care delivery system. Credentialing practices, licensing practices, accreditation organizations, other professional agency influences impacting RESP. Topics include legal implications of RESP; patient safety, communication and record keeping; structure and organization of RESP services; educational programs for RESP personnel; role relationships in health care environments. Prerequisite: RESP 1210, RESP 2510, AHTH 1310 or BIOL 3310, BIOL 3320, CHEM 1090/1100 or permission of instructor. Corequisite: RESP 2610. Three hours of lecture. Extra fee.

RESP 1210(3)  
Principles of Respiratory Care I  
Basic scientific principles of gases, humidity, aerosols and fluid flow as applied to respiratory care. Devices for measuring oxygen levels and regulating pressure and flow of therapeutic gases. Devices for delivering humidity and medical aerosols. Therapeutic application of respiratory care equipment. Basic patient care and assessment. Medical terminology. Two hours of lecture and three hours of lab. Prerequisite: Admission into program. Extra fee.

RESP 1220(3)  
Principles of Respiratory Care II  
Introduction to cardiopulmonary disease. Patient assessment, hyperinflation therapy, bronchopulmonary hydration techniques, and mechanical ventilation procedures. Pulmonary function testing. Sterilization and processing of respiratory equipment. Two hours of lecture and three hours of lab. Prerequisite: Program matriculation. Offered at Firelands only. Extra fee.

RESP 2020(3)  
Cardiopulmonary/Renal Anatomy and Physiology  
Anatomy and physiology of respiratory, cardiovascular, renal systems in depth. Ventilatory mechanics, pulmonary functions, control of respiration, gas diffusion, transport and exchange, acid-base balance, fluid and electrolyte balance, blood gas interpretation. Three hours of lecture. Prerequisite: RESP 1200, AHTH 1310 or BIOL 3310, BIOL 3320, CHEM 1090/1100 or permission of instructor. Corequisite: RESP 1210.

RESP 2030(3)  
Pulmonary Pathophysiology  
Fall or Spring. Disease terminology and basic pathophysiological processes common to organ system disease. Common cardiopulmonary disorders with respect to etiology, pathology, pathophysiology, clinical manifestations, diagnosis (including radiological assessment of the chest) treatment and prognosis. Prerequisite: Program matriculation or permission of instructor.

RESP 2210(4)  
Respiratory Critical Care Procedures  
Manual resuscitators, airway management, arterial sampling and analysis, quality control procedures, non-invasive gas monitoring. Mechanical ventilation. Prerequisite: RESP 1210, RESP 2510, AHTH 1310 or BIOL 3310, BIOL 3320 or permission of instructor. Corequisite: RESP 2610. Three hours lecture, three hours lab. Extra fee.

RESP 2220(3)  
Principles of Respiratory Care III  
Fall or Spring. Advanced patient assessment, diagnostic techniques, and physiological monitoring. Topics include: ECG interpretation, cardiopulmonary diagnostics, clinical laboratory studies, nutritional assessment, ventilator management, ACLS essentials, pulmonary rehabilitation, respiratory home care. Two hours of lecture, two hours of lab per week. Prerequisite: Program matriculation.

RESP 2400(3)  
Neonatal and Pediatric Respiratory Care  
Fall or Spring. Survey of neonatal and pediatric respiratory care with emphasis on assessment, monitoring, diagnostic, and management techniques. Fetal/neonatal transition, gestational development, resuscitation, chest physiotherapy, home care. Two hours of lecture, two hours of lab per week. Prerequisite: Program matriculation or permission of instructor.

RESP 2510(3)  
Respiratory Care Directed Practice  
Includes basic respiratory care skills, infection control, isolation, equipment processing, patient assessment, charting, oxygen therapy, aerosol administration, bronchopulmonary hygiene, hyperinflation modalities, artificial airway management, intubation techniques, noninvasive monitoring, PFTs, ABGs, and CPR. Minimum of 225 hours contact time. Prerequisites: All pre-professional requirements for respiratory care and permission of instructor. Offered at Firelands only.

RESP 2600(2)  
Cases and Reviews in Respiratory Care  
Development of general critical thinking skills: interpretation, analysis, inference, explanation, evaluation and self-regulation with respiratory care application. Focus is on development and modification of respiratory care plans using clinical practice guidelines. Designed also to enhance success on clinical simulation examinations. May be repeated to six hours. Prerequisite: must meet program matriculation standards or permission of instructor.

RESP 2610(2)  
Respiratory Care Directed Practice  
Continuation of procedures with the addition of specialized rotations in the areas of cardiopulmonary rehabilitation, cardiopulmonary diagnostics, physician rounds, management, hospice, polysomnography, radiology, long term care, and home care. Introduction to mechanical ventilation. Minimum of 150 hours contact time. Prerequisites: RESP 1210 and RESP 2510. Offered at Firelands only.
RESP 2710(3)
Respiratory Care Directed Practice
Continuation of procedures with the addition of mechanical ventilator management. Minimum of 225 hours contact time. Prerequisites: RESP 2210 and RESP 2510. Extra fee.

RESP 2810(3)
Respiratory Care Directed Practice
Continuation of procedures with the addition of neonatal and pediatric respiratory care. Minimum of 225 hours contact time. Prerequisites: RESP 2710 and RESP 2400. Extra fee.

RESP 2900(1 - 3)
Special Topics in Respiratory Care
Special topics or issues in respiratory care or cardiopulmonary-related topics which may be of current interest to practitioners. May be repeated to six hours if topics differ. Prerequisite: for practicing respiratory care professionals or permission of instructor.

RESP 3100(2)
Pharmacology for Respiratory Care
The course focus is on the principles, mechanisms of actions, therapeutic indications, contraindications, side effects, and toxic manifestations of pharmacological agents encountered in the practice of Respiratory Care. Also covered are clinical and legal considerations related to medication administration and review of guidelines directing pharmacological practice for specific disease states. Prerequisites: Completion of ANTH 1310, or BIOL 3310 and BIOL 3320, or permission of instructor.

RESP 3400(2)
Advanced Respiratory Care Practitioner Review
Comprehensive content review based on current National Board for Respiratory Care (NBRC) Content Matrices. This course will include recommendations for success on the NBRC's Advance Practitioner Examinations (Registered Respiratory Therapy Written and Clinical Simulation exams). Open to currently enrolled respiratory care students and graduates of any accredited respiratory care program or by permission of instructor.

RESP 3510(3)
Advanced Cardiac Life Support (ACLS)
Advanced patient assessment and management techniques using current national guidelines and recommendations. Includes ACLS knowledge and skills. Course emphasis includes: advanced techniques of airway care, ECG rhythm recognition, cardioversion, transcutaneous pacing, IV access to circulation, selection of appropriate resuscitation methods. Two hours of lecture, two hours of lab per week. Prerequisite: Program matriculation or permission of instructor. Extra fee.

RESP 3600(3)
Cases and Reviews in Respiratory Care
Fall or Spring. Critical thinking, patient/environmental assessment skills, and evidence-based clinical practice techniques are fused. Focus is on the development and implementation strategies for effective care plans, patient-driven protocols, disease-based clinical pathways, and disease management programs. Key elements necessary to the development of critical thinking skills are reviewed and practiced. Prerequisite: Must meet program matriculation standards or permission of instructor.

RESP 4710(3)
Capstone Experience and Seminar I
Supervised field experience in an approved sub-specialty setting combined with a seminar designed to integrate planning, theory, and practice. One of two capstone courses to the Bachelor of Applied Health Science, Respiratory Care Specialization. Emphasis on application rather than observation. Prerequisite: permission of instructor. Minimum 2.50 GPA prior to registration. Two (2) credit hours field experience; One (1) credit hour seminar.

RESP 4720(3)
Capstone Experience and Seminar II
The second of two capstone courses for the Bachelor of Applied Health Science, Respiratory Care Specialization. Supervised field experience in an approved sub-specialty setting combined with a seminar designed to integrate planning, theory, and practice. Emphasis on application rather than observation. Prerequisite: permission of instructor. Minimum 2.50 GPA prior to registration. Two (2) credit hours field experience; One (1) credit hour seminar.

Subject: Romance & Classical Studies
ROCS 2000(3)
European and Latin American Cinema
Films of cultural and literary significance from Mediterranean and Latin American countries seen through study of selected topics, themes or movements. Taught in English. Includes viewing of films with subtitles. Extra fee.

ROCS 2200(3)
African Literature
Fall. Creative and Critical writing in the English language by writers of African descent. Also writers of the Caribbean. Credit allowed for only one of ROCS 2200 or ETHN 2200.

ROCS 4700(1 - 3)
Readings in Romance Languages and Literature
Independent reading for advanced students wishing to conduct comparative study in particular period, author or authors, problem or genre. Prerequisites: consent of chair of department and instructor.

Subject: Recreation & Tourism
RTD 1900(3)
Recreation Leadership
Fall, Spring. Recreation activity analysis and development; leadership theories, styles and techniques with application to the needs and interests of various populations.

RTD 2100(3)
Major Concepts in Recreation
Fall, Spring. Philosophical concepts and historical foundations; personal values of recreation; economic impact; leisure service delivery system and professional leadership.

RTD 2150(3)
Introduction to Tourism and Event Planning
Fall and Spring. Overview of the travel industry; employment opportunities, professional preparation; trends in travel; tourism data; issues in travel and tourism. Prerequisite or Corequisite: RTD 1900 or RTD 2100 or consent of instructor.

RTD 2600(3)
Leisure Services for the Older Adult
Fall, Spring. Characteristics of older adults; therapeutic benefits of recreation; major services and settings; program planning and administrative concerns; field visits.

RTD 3040(3)
Outdoor Recreation
Fall, Spring. Outdoor recreation resources; government management policies; private organizations and enterprise; legal, economic and political impacts; human behavioral patterns.

RTD 3150(3)
Event and Program Planning in Tourism
Fall, Spring, Summer. Overview of the travel industry; employment opportunities, professional preparation; trends in travel; tourism data; issues in travel and tourism. Prerequisite: Recreation or Tourism major, RTD 1900 and RTD 2100 or RTD 2150, or consent of instructor.

RTD 3250(3)
Convention, Meeting, and Resort Administration
Fall, Spring, Summer. Analysis of structure and function for integration of services. Prerequisites: Recreation or Tourism major, RTD 2150 or consent of instructor.

RTD 3800(4)
Concepts and Techniques in Outdoor Education
Fall, Spring. Principles of program planning, organization and administration; operation of areas and facilities; current practices in publicity and public relations; supervision of program and staff; tournament scheduling; program budgeting. Prerequisites: RTD 1900, RTD 2100 and 30 hours.

RTD 3850(3)
Recreation Program Development
Fall, Spring. Comparative analysis of leisure services and their roles in society with focus on personal and professional development. Prerequisites: recreation major and 60 semester credit hours.

RTD 3860(1)
Internship Preparation
Fall, Spring. Prerequisite: recreation major and 60 semester credit hours.

RTD 3870(1 - 5)
Practicum: Leadership and Programming
Fall, Spring, Summer. Application of leadership and program theory to field setting. May be repeated to a maximum of six hours. Prerequisites: 1) Recreation major, RTD 1900, RTD 2100, RTD 3850, 2.5 GPA and approval of advisor; or 2) Tourism major, RTD 1900 or RTD 2100, RTD 2150, RTD 3150, 2.5 GPA, and approval of advisor. Extra fee.

RTD 3950(1 - 3)
Workshop in Current Topics
Fall, Spring, Summer. Intensive educational experience on selected topics related to recreation and tourism.

RTD 4150(3)
Evaluation and Assessment of Planning Strategies for Destination Travel and Tourism
Conceptual framework for planning strategies unique to travel and tourism industry. Analysis of methods and techniques with emphasis on tracking and conversion studies. Prerequisites: 1) Recreation or Tourism major; 2) RTD 3250; 3) RTD 3870; 4) MKT 3000 and 5) 2.5 GPA; or consent of instructor.

RTD 4700(1 - 3)
Independent Study
Fall, Spring, Summer. In-depth project of significance to the student. Credit allocation by project supervisor and approval by chair prior to registration. Prerequisite: permission of instructor. May be repeated.

RTD 4820(3)
Evaluation of Recreation Services
Fall, Spring. Prerequisite: Recreation major or minor, or consent of instructor.

RTD 4830(3)
Recreation Areas and Facilities
Fall, Spring. Planning and design principles; acquisition, development, construction and maintenance of specific types of recreation areas and facilities. Prerequisites: 1) Recreation major or minor, 2.5 GPA, RTD 3870, RTD 3840 and RTD 3850; or 2) Tourism major, 2.5 GPA, RTD 3870, RTD 3150 and RTD 3250; or 3) consent of instructor.
RTD 4840 (3)
Contemporary Issues in Tourism
Fall, Summer. Seminar in current issues of tourism. Prerequisites: 1) Recreation major or Tourism major, 2) 2.5 GPA, 3) RTD 3150, 4) RTD 3250, and 5) RTD 3870; or consent of instructor.

RTD 4870 (1 - 5)
Practicum: Supervision and Administration
Fall, Spring, Summer. Application of program, supervision and administration theory to field setting; may be repeated to maximum of six hours. Prerequisites: 1) Recreation or Tourism major, 2) 2.5 GPA, 3) RTD 3870, and 4) approval of advisor; or consent of instructor. Extra fee.

RTD 4880 (15)
Internship
Fall, Spring, Summer. A concentrated professional experience for students preparing for a career in recreation. Prerequisites: 1) Recreation major, 2.5 GPA, RTD 3840, RTD 3850, RTD 3860, RTD 3870, and approval of advisor; or 2) Tourism major, 2.5 GPA, RTD 3250, RTD 3870, RTD 4870, RTD 4150 or RTD 4830, and approval of advisor. Extra fee.

Subject: Russian

RUSN 1010 (4)
Elementary Language and Culture I
Introduction to the Russian language in its cultural and social context with emphasis on speaking, listening and reading skills. Four class periods and laboratory practice each week. Applicable to the BG Perspective (general education) humanities and arts and international perspective requirements.

RUSN 1020 (4)
Elementary Language and Culture II
RUSN 1010 continued. Four class periods and laboratory practice each week. Increased use of authentic reading materials. Completion of elementary grammar study. Prerequisite: RUSN 1010 or one year of high school Russian, or by placement. Applicable to the BG Perspective (general education) humanities and arts and international perspective requirements.

RUSN 1170 (1)
Conversation and Pronunciation I
Oral practice for beginning students. Concurrent enrollment in RUSN 1010 or RUSN 1020 recommended. May be repeated to three hours.

RUSN 1180 (1)
Conversation and Pronunciation II
Oral practice for intermediate students. Concurrent enrollment in RUSN 2010 or RUSN 2020 recommended. May be repeated to three hours.

RUSN 2000 (2 - 6)
Study Abroad I
Intermediate in-country Russian language training. Prerequisite: RUSN 1020 or equivalent. May be repeated up to 12 hours.

RUSN 2010 (4)
Intermediate Russian I
Fall. Further development in reading, narrating and describing. Writing common documents. Review of elementary grammar. Four class periods and laboratory practice each week. Prerequisite: RUSN 1020 or two years of high school Russian, or by placement. Applicable to the BG Perspective (general education) humanities and arts and international perspective requirements.

RUSN 2020 (4)
Intermediate Russian II
RUSN 2010 continued. Introduction to reading Russian fiction, media, and reference works. Completion of basic grammar. Four class periods and laboratory practice each week. Prerequisite: RUSN 2010 or three years of high school Russian, or by placement. Laboratory practice each week. Applicable to the BG Perspective (general education) humanities and arts and international perspective requirements.

RUSN 2150 (3)
Russian Culture
Russian culture and its manifestations in arts, family and social life, folkways, religion, and other areas. Presentations, readings, and writing in English. Applicable to the BG Perspective (general education) humanities and arts and international perspective requirements.

RUSN 2160 (3)
Contemporary Russian Society
Russian society and cultural values as reflected in such aspects of life as the arts, education, work, recreation, politics, family life, and religion. Cross-cultural approach. Presentations, readings, and writing in English. International perspectives course. Applicable to the BG Perspective (general education) humanities and arts and international perspective requirements.

RUSN 3000 (2 - 6)
Study Abroad II
Advanced in-country Russian language training. Prerequisite: RUSN 2020 or equivalent. May be repeated up to 12 hours.

RUSN 3120 (3)
Introduction to Russian Literature
Enjoyment and analysis of literature with selections from 19th- and 20th-century stories, plays, novels, and essays by writers such as Bulgakov, Chekhov, Dostoevsky, and Tolstoy. Cultural background. Conducted in English. Majors and minors read selections in Russian.

RUSN 3160 (3)
Contemporary Eastern European Societies and Cultures
Contemporary Eastern European societies and cultures (may vary by semester) compared on the bases of select topics, including nation building, religion, and popular art forms. Presentations, readings, and writing in
RUSN 3170(3)
Composition and Conversation I
Fall. Mastery of conversation and writing for personal and preprofessional needs. Corresponding aspects of contemporary culture. Advanced grammar review. Prerequisite: RUSN 2020 or by placement.

RUSN 3180(3)
Composition and Conversation II
Spring. RUSN 3170 continued. Prerequisite: RUSN 3170.

RUSN 3200(2)
Readings in Russian Culture
Readings selected to elucidate themes in Russian cultural and social thought. Guidance in advanced reading techniques. Prerequisite: RUSN 2020 or consent of instructor.

RUSN 3310(2)
Workshop in Translation
Individualized and small group work in translation of various kinds of texts, according to students' program needs. May be repeated to six hours. Prerequisite: RUSN 2020 or consent of instructor.

RUSN 4010(3)
Russian Poetry
Russian lyric and narrative verse since the early 19th century. May focus on major writers such as Pushkin, Lermontov, Blok, Akhmatova, or contemporary poets. Prerequisite: RUSN 2020.

RUSN 4020(3)
Russian Novel
Fascinating examples of Russian fiction selected from such novelists as Bulgakov, Dostoevsky, Nabokov, Pasternak, and Tolstoy. Russian novel in the context of world literature. Readings, class discussion, and writing in English. Majors and minors complete selected reading in the original. May be repeated for credit when offered with different content.

RUSN 4030(3)
Russian Drama
Russian dramatic art and the theater in Russian culture since the 18th century. Emphasis on post-Chekovian (20th century) period. Readings, class discussions, and writing in English. Stagings may be included. Majors and minors complete selected readings in the original.

RUSN 4150(3)
Russian Film
Russian film art and history from its inception to present. Works of major directors (Dovzhenko, Eisenstein, Paradzhanov, Pudovkin, Tarkovsky) and other representative films in their cultural context. Two class meetings and required film screening.

RUSN 4170(3)
Advanced Composition and Conversation
Styles of speech and related advanced grammar. Conversation and composition practice. May be repeated to six hours. Prerequisite: RUSN 3180 or permission of instructor.

RUSN 4190(2)
Journalistic Russian
Advanced skills for reading periodical literature in Russian. Prerequisite: RUSN 4170 or consent of instructor.

RUSN 4800(1 - 3)
Selected Topics
Topic chosen to meet curriculum needs and student requests. May be repeated to six hours. Prerequisite: RUSN 2020.

RUSN 4910(1 - 3)
Studies in Russian
Independent reading for the advanced student. Prerequisites: arrangement with instructor and consent of department chair prior to registration. May be repeated.

Subject: Earth, Environment & Society
SEES 3000(3)
Geospatial Science
Introduction to geospatial science including GIS, remote sensing, and GPS, and their applications to the social and natural sciences. Two lectures and one two-hour lab.

SEES 4800(1 - 3)
Seminar in Earth, Environment & Society
Fall, Spring. Systematic study of selected topics that bridge the disciplines of geology, geography, and environmental studies. May be repeated.

Subject: Sport Management
SM 2010(3)
Introduction to Sport Management
Basic concepts of sport management; career preparation; professional opportunities. Prerequisite: Declared sport management major.

SM 2140(3)
Introduction to Research in HMSLS
Identification and evaluation of research problems; interpretation of research in sport management, exercise science, human movement science, leisure, and athletic training; basic statistical analysis and interpretation. Prerequisites: GSW 1120 and MATH 1120 or higher.
History and Philosophy of Sport
Major historical and philosophical developments in sport.

SM 3010(3)
Sport and Event Management
Processes for managing sport and event enterprises. Roles and skills used by sport and event managers. Prerequisite: C or better in SM 2010 or ATCM 2020 or KNS 2270. May be repeated.

SM 3050(3)
Sport and Event Promotion
Fundamental promotional principles used in marketing sport and event services and products. Focus on strategies of information-based promotional campaigns related to sport and event management. Prerequisites: C or better in MKT 3000 and C or better in either SM 2010 or KNS 2270.

SM 3650(3)
Foundations of Sport Psychology
Nonclinical approach for athletes, teachers and coaches regarding the role of psychological aspects of human behavior as it affects performance in sport and physical activity; psychological well-being, interpersonal skill development and fitness adherence also emphasized. Prerequisite: PSYC 1010.

SM 3660(3)
Psychological Aspects of Exercise and Fitness
Psychological considerations of exercise and fitness, psychological techniques to enhance adherence to fitness/rehabilitation programs and to enhance coping with exercise related injury. Prerequisite: PSYC 1010.

SM 3750(3)
Sport and Public Assembly Facilities
Designing, planning, managing public and private sport and other public assembly facilities. Prerequisites: SM 3870 and junior standing.

SM 3870(1 - 5)
Practicum in Sport Management
Under supervision of sport management division of school of HMSLS, petitioning required before registration; credit hours approved separately by program area. Prerequisites: formal matriculation for sport management majors and approval of appropriate division faculty for sport management and ATCM majors. Professional liability insurance required for ATCM majors. May be repeated up to 5 hours. Extra fee.

SM 3900(3)
Legal Aspects of Sport and Recreation
Negligence liability; control of amateur, professional and school sport; violence/crowd control; product liability; risk management; selected current issues. Prerequisite: junior standing.

SM 3950(1 - 3)
Workshop on Current Topics
On demand. Intensive educational experience in selected topics related to skill development, content update or material development; typically, an all-day or similar concentrated time format. May be repeated.

SM 4250(3)
Sport and Gender
Cultural, social-psychological and physiological considerations associated with gender and participation in sport and physical activity. Prerequisite: junior standing.

SM 4500(3)
Managing Revenues and Expenditures in Sport Enterprise
Focuses on generating revenue and supervising spending in sport organizations. Special attention is given to resource management and operations unique to the sport environment. Prerequisites: SM 2010, SM 3050, and matriculation into the Sport Management major.

SM 4700(1 - 3)
Independent Study in Sport Management
In-depth study project of a topic of particular significance to the student; project must be approved by project supervisor and program area chair prior to registration; may be repeated. Prerequisite: permission of supervisor and program chair.

SM 4870(1 - 5)
Practicum in Sport Management
Under supervision of sport management division of School of HMSLS, petitioning required before registration; credit hours approved separately by program area. Prerequisites: SM 3870 and approval of appropriate division faculty. Professional liability insurance required for ATCM majors. May be repeated up to 5 hours. Extra fee.

SM 4890(15)
Internship in Sport Management
Field experience for sport management and ATCM majors only. Petitioning required before registration. Prerequisites: 52 hours in major field, satisfactory completion of SM 3870, GPA of 2.5 or above, an average of 2.7 or above in the major field and approval of appropriate division faculty. ATCM majors must also complete KNS 3130. Professional liability insurance required for ATCM majors. Extra fee.

Subject: Sociology
SOC 1010(3)
Principles of Sociology
Fall, Spring, Summer. Elements and concepts of social organization, social change and group relationships. Applicable to the BG Perspective (general education) social sciences requirement.

SOC 2020(3)
Social Problems
Fall, Spring, Summer. Sociological analysis of contemporary social problems. Prerequisite: SOC 1010. Applicable to the BG Perspective (general education) social sciences requirement.

SOC 2100(3)
Sociology of Religion
Role of religion in society; influence of religion upon society and effects of social structure on religious beliefs. Prerequisite: SOC 1010.

SOC 2310(3)
Cultural Anthropology
Basic concepts and objectives in study of culture. Range of cultural phenomena and approaches to their study. Applicable to the BG Perspective (general education) social sciences and international perspective requirements.

SOC 3000(1 - 3)
Topics in Sociology
Courses being considered for offering on regular basis. See class schedule for listing. May be repeated. Prerequisite: SOC 1010.

SOC 3010(3)
Social Psychology
Fall, Spring, Summer. Social behavior; process of interaction and interpersonal influence. Prerequisite: SOC 1010. Applicable to the BG Perspective (general education) social sciences requirement.

SOC 3020(3)
Introduction to Sociological Theory
Fall, Spring. Major theories and concepts of sociology. Prerequisite: SOC 1010.

SOC 3120(3)
Population and Society
Fall, Spring. Population growth and distribution; bearing on current economic, political and social problems. Prerequisite: SOC 1010 or consent of instructor. Applicable to the BG Perspective (general education) social sciences requirement.

SOC 3130(3)
Fertility and Family Planning
Spring. Sociological causes and consequences of human fertility patterns with emphasis on trends and differentials in the United States, including: fertility decision making, value and costs of children, contraception and abortion, unplanned parenthood, voluntary childlessness, illegitimacy, sex education and related public policies. Prerequisite: SOC 1010.

SOC 3160(3)
Minority Groups
Fall, Spring, Summer. Analysis of ethnic and minority groups in American society; conditions that favor and hinder acceptance of such groups as integral elements in national population. Prerequisite: SOC 1010. Applicable to the BG Perspective (general education) cultural diversity in the United States requirement.

SOC 3170(3)
Social Stratification and Poverty
Spring. Inequalities in distributions of wealth, power and prestige in societies. Types of systems of inequality, caste, estate, class. Consequences of inequalities for society as a whole and for segments of society; educational-occupational opportunities, racial-ethnic relations, social mobility, social change. Prerequisite: SOC 1010.

SOC 3400(3)
Deviance and Social Control
Fall, Spring, Summer. History of attempts to define and explain deviant behavior. Social conditions and processes associated with careers of deviants; relationship of deviancy to problems of social control. Prerequisite: SOC 1010. Applicable to the BG Perspective (general education) social sciences requirement.

SOC 3410(3)
Juvenile Delinquency
Fall, Spring, Summer. Analysis and processes of development, treatment, prevention and control of juvenile delinquency. Prerequisite: SOC 1010.

SOC 3610(3)
The Family
Fall, Spring, Summer. Traditional and contemporary family types; current similarities and differences of family organization in various cultural environments. Prerequisite: SOC 1010. Applicable to the BG Perspective (general education) social sciences requirement.

SOC 3680(3)
Introductory Methodology
Fall, Spring. Survey course on research methods in sociology: nature of science, theory construction, operationalization of a research problem, alternative research designs (including evaluation), instrumentation, data collection and data analysis. Prerequisite: SOC 1010 or consent of instructor.

SOC 3690(3)
Introductory Statistics
Fall, Spring, Summer. Data presentation, measures of dispersion, correlation, regression, probability, probability distributions, sampling distributions, hypothesis testing and analysis of variance. Prerequisite: SOC 1010.

SOC 3710(3)
Applied Survey Research
Practical experience in survey research in an applied context: policy issues, problem formulation,
measurement, questionnaire-interview design, sampling procedures, data collection, electronic data processing, interpretation and report writing. Prerequisites: SOC 1010, SOC 3680 and SOC 3690 or consent of instructor.

SOC 4040(3)
Social Gerontology
Spring. Problems of aged in contemporary society. Social gerontology as field of interest of interdisciplinary nature; emphasis on socio-economic approach. Prerequisite: SOC 1010.

SOC 4140(3)
Society and the Environment
Fall. Present issues and problems of human environment from a sociological perspective. Special emphasis on analysis of the present problems of resources, pollution, technology, population, consumerism and the use of energy.

SOC 4170(3)
Sociology of Sport
Fall, Spring. Sociological concepts and theories to investigate sport as social institution and relationship to other social institutions; organizational theory and small group research applied to sport; social psychological aspects of sports. Prerequisite: SOC 1010.

SOC 4190(3)
Population and Development
Sociological approaches to understanding relationship between population trends and poverty in developing societies. Issues include food supplies, birth control, urbanization.

SOC 4200(3)
Introduction to Demographic Techniques
Fall or Spring. Methods of measurement for enumeration and registration data; construction of life tables; measures of fertility, nuptiality, migration, and mortality; examination of census variables. Prerequisites: SOC 1010, SOC 3680, and SOC 3690, or consent of instructor.

SOC 4270(3)
Introduction to Applied Demography
Fall or Spring. An Introduction to the field of applied demography with a focus on the source and accuracy of demographic information, computer techniques used in accessing census data and an overview of key demographic tools.

SOC 4410(3)
Criminology
Fall, Spring, Summer. Definition, measurement, and correlates of crime. Classical and contemporary theories of crime causation. Societal responses to crime, offenders, and victims. Prerequisite: SOC 1010.

SOC 4420(3)
Corrections
Fall, Spring. Historical, philosophical, and sociological analysis of strategies and institutions designed to punish and change the behavior of criminal offenders. Prerequisite: SOC 4410.

SOC 4450(3)
Soc Perspectives Interpersonal Violence
Spring. Survey of social scientific theory, research and policy on interpersonal violence. Contemporary issues on violence including homicide, sexual assault, intimate partner and family violence and youth and gang violence. Prerequisite: SOC 1010.

SOC 4600(3)
Sociology of Gender
Theoretical and empirical literature on family and sex roles; socialization, changing nature of women's and men's roles, and prospects for future. Institutional sources of women's and men's roles in other cultures. Prerequisite: SOC 1010. Credit only allowed for one of SOC 4600 or WS 4600.

SOC 4610(3)
Sociology of Family Violence
Fall, Spring. Current research and theoretical perspectives on family violence: spouse battering; marital rape; sibling violence; incest; child abuse. Sex roles, family ideologies, social structures, power relations examined as constituting the basis of family conflict and violence between family members. Prerequisite: SOC 1010.

SOC 4700(1 - 8)
Readings, Research and Internship
Fall, Spring, Summer. Supervised independent work in selected areas. Extensive reading of more advanced literature, planned research or field placement in an approved setting. May be repeated, but cannot exceed a total of 12 hours. Prerequisites: junior standing and a minimum of 12 hours of accumulated credit in regularly scheduled SOC courses. Prior written permission of instructor and department chair required. Graded S/U.

SOC 4710(1 - 6)
Applied Sociology Experience
Fall, Spring, Summer. Supervised field experience in an applied sociology setting. May be repeated up to nine credit hours maximum. Prerequisite: departmental permission.

SOC 4800(3)
Senior Seminar
Spring. Capstone seminar in sociology for senior majors. Integrates knowledge from previous sociology courses. Students carry out research project under direction of faculty member of choice. Prerequisite: senior major status. May be repeated.

SOC 4890(1 - 5)
Internship
Fall, Spring, Summer. Provides practical experience in applied sociology such as criminology, human services, population studies, community planning and survey research. May be repeated. Only five hours may be applied
to SOC major or minor. Prerequisite: 12 hours in SOC. Graded S/U.

**SOC 4950 (1 - 4)**
Workshop on Current Topics
Intensive educational experience on selected topics. Typically, an all-day or similar concentrated time format. Requirements usually completed within time format. May be repeated if topics differ, on approval of adviser.

**Subject: Social Science**

**SOSC 1010 (3)**
Introduction to the Social Sciences
Fundamental concepts and methods in the social sciences.

**SOSC 2890 (3 - 4)**
Human Services Practicum
Supervised field experience in an approved agency combined with a seminar designed to integrate theory and practice. Capstone course to the human services curriculum. Prerequisite: DHS 3300 or equivalent and consent of instructor.

**Subject: Social Work**

**SOWK 1100 (3)**
Introduction to Social Work Profession
Fall, Spring. Origins of the profession and its relationship to social welfare. Generalist knowledge base of social work and professional values which guide social work practice.

**SOWK 3000 (3)**
Social Work Research Methods
Fall, Spring. Includes content specific to the needs of the generalist social worker. Topics include single subject design, program evaluation, quantitative and qualitative methodologies, ethics and critical evaluation of existing research. Prerequisite: SOC 3690, MATH 1150 or PSYC 2700.

**SOWK 3120 (3)**
Social Welfare Institutions
Fall, Spring. The institutions of social welfare; basic concepts of social welfare as a response to unmet human need. Issues of diversity, growth of the profession and related values. Prerequisites: social work major, POLS 1100 and ECON 2000; or consent of instructor.

**SOWK 3200 (3)**
Human Behavior and the Social Environment I
Fall, Spring. Life span from conception to later adolescence utilizing an ecological perspective. Impact of biological, psychological and socio-cultural systems on human growth and development. Prerequisites: social work major, BIOL 1040, SOC 1010, and PSYC 1010.

**SOWK 3210 (3)**
Human Behavior and the Social Environment II
Fall, Spring. Continuation of the life span which includes early adulthood, middle adulthood, aging process, death and dying. Theories and research on various systems (family, groups, organizations) which influence human growth and development. Prerequisites: social work major and SOWK 3200.

**SOWK 3220 (3)**
Social Policy and Social Services
Fall, Spring. Social problems, social policy and social services as interrelated areas. Basic models for evaluating and influencing social policy. Prerequisites: social work major and SOWK 3200.

**SOWK 3230 (3)**
Practice I
Fall and Spring. This course is the first course in three course sequence of practice courses. Its purpose is to build knowledge related to ethnic and culturally diverse populations and then build skills that will prepare students to assess needs, develop intervention strategies with an emphasis on direct practice. Prerequisites: SOWK major.

**SOWK 3250 (4)**
Practice II
Fall and Spring. Components of generalist social work practice; needs and strengths identification, assessment, intervention strategies with emphasis on direct (micro) practice, evaluation. One credit lab is earned for off-campus experience in social work setting which integrates theory with practice assignments. Prerequisites: junior standing, social work major, SOWK 3200, DHS 3300, SOWK 3230; or consent of instructor.

**SOWK 3320 (3)**
Law for Social Workers
Fall, Spring. Legal issues related to confidentiality, legal and legislative processes, family law, courts and adjudication process, role of social worker as witness, legal issues related to disenfranchised population. Prerequisites: junior standing, social work major.

**SOWK 4000 (1 - 3)**
Topics in Social Work
On demand. Courses being considered for offering on regular basis. May be repeated.

**SOWK 4060 (3)**
Practice III
Fall, Spring. Course builds on previous practice courses covering material from mezzo through macro practice. Content includes social work treatment and task group, organizational and community practice. Community practice skills include: advocacy, fundraising, education, lobbying. Prerequisites: Social Work major, SOWK 3200, DHS 3300 and SOWK 3230 or consent of instructor. Can be taken concurrently with SOWK 3250.

**SOWK 4230 (12)**
Field Instruction
Fall, Spring, Summer. Required social work capstone course, practice experience in selected social agency taught by field instructor and monitored by faculty liaison. Minimum of 448 hours. Field practice assignments
are made via coordination with prospective social service agency, the field coordinator and the faculty.
Prerequisites: all core courses completed prior to field instruction, senior standing, social work major and
2.50 GPA in core and accumulative. Graded S/U.

**SOWK 4300(3)**
**Practice Skills Seminar**
Fall, Spring, Summer. Faculty and field instructors conjointly teach this course. Conceptual frameworks,
precise techniques and practitioner styles are considered as they underlie the student's problem solving in
field instruction. Taken concurrently with SOWK 4230.

**SOWK 4700(1 - 3)**
**Independent Study**
Fall, Spring, Summer. Student designs and carries out study or special project in area of interest.
Prerequisites: junior standing, social work major and faculty sponsor. May be repeated up to six hours.

**Subject: Spanish**

**SPAN 1010(4)**
**Elementary Spanish I**
Fall, Spring. Introduction to Spanish language and to Hispanic cultures. Communicative approach to teach
beginning language use in the four skill areas: listening, speaking, reading, writing. Four classroom hours
and one-hour scheduled laboratory practice each week. Applicable to the BG Perspective (general education)
humanities and arts and international perspective requirements.

**SPAN 1020(4)**
**Elementary Spanish II**
Fall, Spring. SPAN 1010 continued. Four classroom hours and one-hour scheduled laboratory practice each week.
Prerequisite: SPAN 1010 or one year of Spanish in high school. Applicable to the BG Perspective (general
education) humanities and arts and international perspective requirements.

**SPAN 2010(3)**
**Intermediate Spanish I**
Fall, Spring. Communicative approach to teach intermediate language use in the four skill areas: listening,
speaking, reading, writing (emphasis on composition). Reading and discussion in Spanish of cultural readings.
Three classroom hours and one-hour scheduled laboratory practice each week. Prerequisite: SPAN 1020 or two
years of Spanish in high school. Applicable to the BG Perspective (general education) humanities and arts and
international perspective requirements.

**SPAN 2020(3)**
**Intermediate Spanish II**
Fall, Spring. SPAN 2010 continued. Three classroom hours and one-hour scheduled laboratory practice each week.
Prerequisite: SPAN 2010 or three years of Spanish in high school. Applicable to the BG Perspective (general
education) humanities and arts and international perspective requirements.

**SPAN 2120(3)**
**Spanish Cultural Readings IV**
Fall, Spring. Development of reading comprehension in Spanish using cultural materials concerning Spain and
Spanish America. Conducted in English. Prerequisite: SPAN 2010 or three years of Spanish in high school.
Cannot be taken for credit if SPAN 2020 credit has been received. Applicable to the BG Perspective (general
education) humanities and arts and international perspective requirements.

**SPAN 2200(2)**
**Language and Culture Through Community Living**
Fall, Spring. This course for La Comunidad residents is designed to improve conversational Spanish and
cultural awareness about Spanish-speaking countries. Prerequisite: must be a La Comunidad resident.
Repeatable up to 8 credits.

**SPAN 2210(1)**
**Hispanic Songs**
Traditional and popular songs from various Hispanic countries, sung in Spanish; emphasis on study of texts
and pronunciation. May be repeated to maximum of three hours. Prerequisite or corequisite: SPAN 1010 or
consent of instructor. Usually taught abroad.

**SPAN 2310(1)**
**Hispanic Folk Dancing**
Traditional dances of Spain and Spanish America, especially those of Mexico and Columbia. Learning and
performance of dances accompanied by regional and historical background. May be repeated to maximum of two
hours. No prerequisite. Usually taught abroad.

**SPAN 2700(3)**
**Introduction to Latin American Culture Studies**
Fall. Introductory overview of Latin American culture from a variety of disciplinary perspectives. Topics may
include racial, national and regional identities; urban and rural society; popular celebrations and political
protest. Conducted in English.

**SPAN 3000(1)**
**Preparation for Study in Spain**
Spring. Limited to participants in the AYA Spain Programs (year, semester, summer). Readings and discussions
to encourage and facilitate student preparation for upcoming study abroad experience. Course conducted during
last 6 weeks of Spring semester, following program application deadline. Does not count toward Spanish major
or minor. Conducted in English. Graded S/U.

**SPAN 3510(3)**
**Spanish Composition and Conversation I**
Development of skills in speaking and writing, with appropriate grammar review. Prerequisite: SPAN 2020.

**SPAN 3520(3)**
**Spanish Composition and Conversation II**
Continued development of skill in speaking and writing, with appropriate grammar review. Prerequisite: SPAN
2020.
SPAN 3670(3)
Introduction to Spanish Peninsular Literature
Outstanding authors, works and movements of Peninsular literature from the Middle Ages to the present.
Prerequisite: SPAN 3510, SPAN 3520 or consent of instructor.

SPAN 3680(3)
Introduction to Spanish American Literature
Outstanding authors, works and movements from the time of discovery to the present. Prerequisite: SPAN 3510, SPAN 3520 or consent of instructor.

SPAN 3710(3)
Spanish Civilization
Political, social, intellectual, artistic development of Spain. Prerequisite: SPAN 3510 or SPAN 3520.

SPAN 3770(3)
Civilisation of Mexico and the Caribbean
Fall, Spring. Political, social, intellectual, artistic development of Mexico, Central America and Spanish-speaking islands of the Caribbean. Prerequisite: SPAN 3510 or SPAN 3520.

SPAN 3780(3)
Civilisation of South America
Fall, Spring. Political, social, intellectual, artistic development of Spanish-speaking countries of South America. Prerequisite: SPAN 3510, SPAN 3520 or consent of department.

SPAN 3790(1 - 3)
Readings in Hispanic Studies
Fall, Spring. Independent readings for the intermediate student who wishes to start studying a particular period or issue. May be repeated. Prerequisites: Consent of department chair and instructor.

SPAN 3800(3)
Topics in Hispanic Studies
Fall, Spring, Summer. Overview of either Peninsular, Latin American and/or Latinos in the U.S. issues related to language, linguistics, film, literature and/or culture. May be repeated if topics clearly differ. Prerequisites: SPAN 3510 and SPAN 3520 and admission to the AYA Program. Repeatable up to twenty-four credit hours. Offered through AYA Program.

SPAN 3810(3)
Selected Topics in Spanish
Fall, Spring, Summer. Topics chosen from either Peninsular, Latin American and/or U.S. Latinos literature, linguistics, language, film and/or culture. May be repeated up to nine credit hours with different topics. Prerequisites: SPAN 3510 and SPAN 3520.

SPAN 3950(1 - 3)
Workshop in Spanish
Intensive educational experience on selected topics. Typically, an all-day or similar concentrated time format. May be repeated if topics differ, on approval of advisor. Course may be repeated once up to six hours.

SPAN 4010(3)
Latin American Culture Studies Seminar
Spring. Investigation and discussion of cultural topics from a number of different perspectives. Topic may vary from year to year. Prerequisite: SPAN 2700.

SPAN 4240(3)
Exploring Latino/a and Latin American Culture through Service-Learning
Fall. This course seeks to explore Latino/a and Latin American culture and recent history. To this aim, the students will engage in service to the Latino/a community in the Northwest Ohio region. Through the service-learning experience, students will have the opportunity to complement the knowledge acquired through reading the course materials with the first hand oral accounts provided by community members. The service-learning is designed to promote active learning by making a meaningful contribution to the community. Prerequisite: SPAN 3770 or SPAN 3780. Repeatable if topics differ on approval of undergraduate coordinator.

SPAN 4310(3)
Spanish American Fiction
Major authors and works from literary movements of the 19th and 20th centuries, with emphasis on either regionalism or the contemporary novel. Prerequisite: SPAN 3680.

SPAN 4410(3)
Medieval and Golden Age
Representative masterpieces of Spanish literature from the Middle Ages and the Siglo de Oro: Epic, poetry, novel and theater. Prerequisite: SPAN 3670.

SPAN 4420(3)
Spanish Literature of the Nineteenth Century
Outstanding works of the 19th century; romanticism, realism, naturalism, prose and poetry. Prerequisite: SPAN 3670.

SPAN 4440(3)
Contemporary Spanish Literature
Outstanding works from the generation of 1898 to the present; poetry and prose. Prerequisite: SPAN 3670.

SPAN 4500(3)
Advanced Grammar and Composition
Grammar and composition, especially appropriate for future teachers of Spanish. Prerequisites: SPAN 3510 and SPAN 3520.

SPAN 4550(3)
Applied Linguistics
Phonological, morphemic, syntactical, semantic aspects of Spanish; application to language learning and
teaching. Prerequisites: SPAN 3510 and SPAN 3520 or consent of instructor.

SPAN 4630(3)
Career Spanish
Development of translation skills (Spanish to English and English to Spanish) on materials representing a wide range of technical, professional and business careers. Prerequisites: SPAN 3510 and SPAN 3520. Usually taught abroad.

SPAN 4700(1 - 3)
Readings in Hispanic Literature
Independent reading for the advanced student who wishes to study a particular period or author. Prerequisites: consent of department chair and instructor. May be repeated.

SPAN 4810(3)
Spanish-American Literature I: Discovery to Modernism
Representative authors from the Chroniclers through the Romanticists; prose and poetry. Prerequisite: SPAN 3680 or consent of instructor.

SPAN 4820(3)
Spanish-American Literature II: Modernism to the Present
Representative authors from Modernism and subsequent 20th-century literary developments; prose and poetry. Prerequisite: SPAN 3680 or consent of instructor.

SPAN 4880(3)
Contemporary Mexican Literature
Outstanding works of the 20th century. Prerequisite: SPAN 3680 or consent of instructor.

SPAN 4890(3)
Hispanic Studies
Intensive study of an author, literary school, genre, linguistic topic, or selected theme. May be repeated if topics clearly differ. Prerequisite: SPAN 3670 or SPAN 3680.

Subject: Applied Statistics

STAT 2000(3)
Using Statistics
Fall, Spring. Descriptive statistics, probability distributions, estimation, hypothesis testing, regression, contingency tables. Interpretation and misinterpretation of statistical techniques. Does not count toward BSBA degree.

STAT 2110(3)
Elementary Statistical Methods I
Fall, Spring. Elementary probability, random variables, probability distributions, sampling, descriptive statistics, sampling distributions, estimation. Prerequisite: credit for MATH 1260 or MATH 1310, or C or better in MATH 1340. Credit not given for both STAT 2110 and MATH 2470.

STAT 2120(3)
Elementary Statistical Methods II
Fall, Spring. Estimation, hypothesis testing, regression, correlation, analysis of variance and contingency tables. Prerequisite: C or better in STAT 2110 or equivalent.

STAT 2200(5)
Elementary Business Statistics
Elementary probability, random variables, probability distributions, sampling, descriptive statistics, sampling distributions, estimation, hypothesis testing, regression, correlation, analysis of variance and contingency tables. Four hours of lectures and one two-hour laboratory. Prerequisite: C or better in MATH 1260 or MATH 1310, or both MATH 1340 and MATH 1350. Credit not given for both STAT 2200 and MATH 2470, or both STAT 2200 and STAT 2110, or both STAT 2200 and STAT 2120.

STAT 4020(3)
Regression Analysis
Fall. Linear, nonlinear and multiple regression and correlation analysis. Prerequisite: MATH 4410 or consent of instructor.

STAT 4060(3)
Sample Design
Spring. Sampling as a tool of scientific inference in research and management. Planning surveys; sample size, stratified, systematic and cluster sampling; sources of error in surveys. Prerequisite: MATH 4410 or consent of instructor.

STAT 4080(3)
Experimental Design
Spring. Constructing statistical designs and analyzing resulting data; basic experimental design and analysis of variance. Prerequisite: MATH 4410 or consent of instructor.

STAT 4120(3)
Applied Nonparametric Statistics
Nonparametric approach to testing hypotheses; contingency tables, goodness of fit, procedures based on ranks. Prerequisite: MATH 4410 or consent of instructor.

STAT 4140(3)
Statistical Quality Control
Statistical process control; Shewhart control charts (variables and attributes); acceptance sampling (single, double and sequential); Dodge-Romig tables. Prerequisite: MATH 4410 and STAT 2120 or STAT 2200, or consent of instructor.

STAT 4160(3)
Time Series Analysis
Stochastic stationary and nonstationary models; use in forecasting seasonal and nonseasonal discrete time series; fitting models to time series data. Prerequisite: MATH 4410 or consent of instructor.
STAT 4910(1 - 3)
Studies in Statistics
On demand. Investigation of selected areas or contemporary problems. May be offered individually and in classes depending on student needs and nature of material. May be repeated.

Subject: Telecommunication

TCOM 1030(3)
Media and the Information Society
Fall, Spring. Social trends as influenced by technology in the information society. Social policy and effects involving information technologies and information services. Examples from the telephone, computer, print, film, television, cable, radio and satellite systems. No credit for both JOUR 1000 and TCOM 1030. Open to nonmajors.

TCOM 1990(1)
Student Media Participation
Fall, Spring, Summer on demand. Participation in departmental or student media assignments in consultation with faculty and staff. May be repeated. Graded S/U.

TCOM 2500(3)
Radio and Television Production for Non-TCOM Majors
Fall, Spring. Basic theories and tasks of audio and video production including scripting, technical quality and aesthetics. In-studio experience in radio and television operation. Laboratory hours. No prerequisites. Not open to TCOM majors. Extra fee.

TCOM 2600(3)
Writing for Electronic Media
Fall, Spring, Summer on demand. Writing for broadcasting and other electronic media; creating scripts with visual and aural appeal; conveying messages in clear, economical, conversational yet professional style to effectively communicate to mass audiences. Prerequisites: GSW 1100/GSW 1110 and TCOM 1030/JOUR 1000. Extra fee.

TCOM 2620(3)
Radio Announcing and Production
Fall, Spring. Style and basic principles and practices of announcing; theories and processes of audio production. Laboratory hours. Prerequisite: TCOM 2600. Extra fee.

TCOM 2630(3)
Video I: Production Fundamentals
Fall, Spring. Principles of multiple-camera studio directing for television and film. Examination of conventional practices. Series of studio workshops with emphasis on directing, content development, planning and scripting, and composition. Laboratory hours. Prerequisite: TCOM 2600. Nonmajors by permission of instructor. Extra fee.

TCOM 2640(3)
Interactive Communication Technologies I
Fall, Spring, Summer on demand. Practical and conceptual issues associated with new electronic media with emphasis on the internet and new digital media technologies. Basics of web design integrated with social science perspectives on new electronic media. Prerequisite: TCOM 2600.

TCOM 2650(3)
Internet Applications for the Telecommunications Industry
On demand. Internet-based software applications that are affecting the telecommunication industry. Provides students with the fundamentals for functioning in an industry that is increasingly characterized by its reliance on Internet-based activities. Prerequisite: TCOM 2600 or consent of instructor.

TCOM 2700(3)
Topics in Minorities and Film/Video
On demand. Through discussions, screenings, and research, the student will explore the portrayal and/or participation of minorities in film and video. Topic varies. No prerequisite. Applicable to the BG Perspective (general education) cultural diversity in the United States requirement. Extra fee.

TCOM 3500(3)
Scriptwriting
Fall. Basic principles of scripting teleplays (television) and screenplays (film). Covers the essential elements, from developing an initial story idea and creating believable characters, to writing a complete script and pitching the idea to a knowledgeable audience. Prerequisite: TCOM 2600, nonmajors with permission of department.

TCOM 3550(3)
Global Telecommunication Systems
Fall, Spring. Survey of telecommunication systems in the global context. Comparison of technical and cultural bases, economics, politics, programming, policy and regulation and audience research. Prerequisite for TCOM majors: TCOM 2600. Non-majors by permission of department.

TCOM 3600(3)
Media Research
Fall, Spring, Summer. Overview of approaches to social research in media studies; survey methods, including sampling, measurement, interviewing, questionnaire design and presentation of results; content analysis; ratings, and interpretation of elementary descriptive statistics. Junior standing recommended.

TCOM 3640(3)
Video II: Field Production and Editing Fundamentals
Fall. Field experience in content creation and production. Focus on single-camera, film-style video production. Includes equipment handling, artistic and aesthetic composition, tape and nonlinear editing, and production management. Laboratory hours. Prerequisite: TCOM 2630 or equivalent experience. Extra fee.

TCOM 3650(3)
Broadcasting History
Fall. Current U.S. broadcasting with view of antecedents in regulations, economics, programs, audiences, stations, networks, technology and employment.

**TCOM 3660 (3)**  
**Media Effects**  
Fall, Spring, Summer. Theories and research studies of media effects. Critical examination of opposing viewpoints. Prerequisite: TCOM 2600.

**TCOM 3680 (3)**  
**Radio Workshop**  
Fall. Development of program ideas through all stages of planning, writing, directing and selling. Individual program projects for possible use on WBGU or WFAL. Prerequisite: TCOM 2620. Extra fee.

**TCOM 3950 (1 - 3)**  
**Workshop on Current Topics**  
On demand. Intensive educational experience on selected topics. Typically, an all-day or similar concentrated format. Requirements usually completed within time format. May be repeated if topics differ, on approval of adviser.

**TCOM 4000 (3)**  
**Topics in Documentary Studies**  
On demand. Examines radio-TV-film documentaries, including history-criticism, research-writing. Lecture/discussions and viewings/labs comprise the meetings. Interdisciplinary participation is encouraged. May be repeated once for different topics. Prerequisite: GSW 1120 and instructor permission.

**TCOM 4520 (3)**  
**Online Communities and Social Environments**  
On demand. This course examines applications and implications of online communities. Social psychological perspectives of online forums will be primarily examined, but the subjects of discussions and readings are not limited to those perspectives. Junior standing recommended.

**TCOM 4530 (3)**  
**Media Sales and Promotion**  
On demand. The course introduces the advertising and media product sales process for telecommunications media and various techniques to promote media companies and products. Prerequisites: TCOM 1030/JOUR 1000 or consent of instructor.

**TCOM 4550 (3)**  
**Telecommunications Management**  
Spring. Function, organizational structure and procedures involved in the operation of the telecommunication industry and electronic media. Prerequisite: TCOM 2600.

**TCOM 4600 (3)**  
**Telecommunication Policy and Regulation**  
Fall, Spring. Theoretical approaches to key policies and regulations shaping activities in the telecommunication sector. Applied study of policy and regulatory issues in broadcasting, cable, telephony, the Internet and digital media. Prerequisites: Junior standing required; TCOM 2600.

**TCOM 4610 (3)**  
**Audience Research**  
Fall. Theories of audience and how they are applied in audience research. Types of audience research and how they are used in different settings. Techniques in collecting and analyzing data for audience research and the role of audience research in advertising, programming, financial analysis and social policy decision making. Prerequisite: TCOM 2600.

**TCOM 4620 (3)**  
**Radio Programming and Audiences**  
Spring. Modern radio program formats and their audiences in the United States. Prerequisite: TCOM 2620.

**TCOM 4630 (3)**  
**Telecommunications Programming**  
Fall. Audience behavior, program genres and the structure and procedures of the telecommunication industry in the selection, scheduling and evaluation of television, cable programs and online portal web sites. Prerequisite: TCOM 2600.

**TCOM 4640 (3)**  
**Interactive Communication Technologies II**  
On demand. Advanced level interactive media production. Course topics, examples, and assignments are related with contemporary interactive media skills. Assigned practices of interactive media production. Prerequisite: TCOM 2640.

**TCOM 4650 (3)**  
**Television and Film Criticism**  

**TCOM 4670 (3)**  
**Gender, Media & Culture**  
On demand. This course examines mass media as work place, cultural forum, and the force of social change for women, men, and sexual minority groups. Junior standing required. Credit not given for both TCOM 4670 and WS 4670. Applicable to the BG Perspective (general education) cultural diversity in the United States requirement.

**TCOM 4680 (3)**  
**Video III: Advanced Directing and Producing**  
Spring. Advanced methods of film-style or multiple-camera studio production techniques including master scene, screen direction, interviews, multiple-camera productions, blocking, dramatic television directing, multiple-person interviews, composition, lighting, and feature production. Emphasis on using production as a means for expression and working in production environments. May be repeated once. Prerequisite: TCOM 3640 or
equivalent experience. Extra fee.

**TCOM 4690 (1 - 3)**
**Seminar: Contemporary Aspects of Telecommunications**
On demand. Investigation and analysis of area in telecommunication. Various topics of current concern. May be repeated with permission of adviser to six hours.

**TCOM 4700 (3)**
**Practicum in Video Production**
Fall. Application of technical, practical, media business and management knowledge to develop and produce television programs in collaboration with Channel 27 WBGU-TV (PBS) and Bowling Green State University. Areas covered: Production technology, equipment, pre-production, production and post-production, budgeting, screening, marketing and new technology in video production. Prerequisite: TCOM 3640.

**TCOM 4750 (3)**
**Electronic Surveillance and Privacy**
On demand. The course examines the social implications of a world where everyday life is increasingly subject to electronic surveillance. Theoretical and policy approaches to understanding the growth of electronic surveillance and its consequences. Indepth analysis of various modes of electronic surveillance. Evaluation of North American and European privacy policy frameworks.

**TCOM 4860 (3)**
**Media Industry and Events**
On Demand. Course draws on case studies and theories to critically investigate and provide insight and understanding of the increasing corporate links between large media industries and entertainment conglomerates. This synthesis is best understood through the role of the planning of media events, mediascapes and geographies and the organization of corporate media events. Prerequisite: TCOM 2600.

**TCOM 4890 (1 - 6)**
**Internship in Telecommunications**
Fall, Spring, Summer. Supervised field experience in electronic communication. Student must arrange for experience with approval of intern supervisor in advance of registration. May be repeated up to six hours. Limited to TCOM majors. Prerequisite: TCOM 2600. Graded S/U.

**TCOM 4900 (1 - 3)**
**Problems in Telecommunications**
Fall, Spring, Summer. For advanced student who wishes to do intensive research in telecommunication and media studies, independently or in conjunction with courses regularly offered. May be repeated if topics differ. Prerequisite: consent of department.

**Subject: Technology Education**

**TE 2520 (3)**
**Elements of Instruction**
Fall. Models of instruction as related to learner, and functions and purposes of specialized career and technology education programs on all educational levels including individual observation and participation at various levels.

**TE 3520 (3)**
**Instructional Scope and Sequence**
Spring. Design and implementation of instructional systems including performance objectives, appropriate content, teaching-learning strategies and evaluation in specialized career and technology education programs on all educational levels, including individual observation and participation at various levels. Technology Education majors (coded 34451) must complete TE 2520 with a "C" or better. Prerequisite: TE 2520.

**TE 4470 (3)**
**Teaching Technology Systems**
Fall even years. Integration and use of principles developed in previous methods courses and laboratory settings; selection, organization, adaptation and use of instructional materials or curriculum projects related to industrial technology systems. Prerequisites: CONS 2350. Extra fee.

**TE 4490 (3)**
**Organization and Administration**
Spring. Financial and business procedures, program, laboratory and equipment planning; maintenance programs, classroom and laboratory management systems; purchasing, storage, dispensing and inventory control procedures; public relations, curricular responsibilities, innovative programs. Taken concurrently with TE 4970 Student Teaching. Technology Education majors (coded 34451) must complete TE 3520 with a "C" or better. Prerequisite: TE 3520.

**TE 4530 (3)**
**Teaching Design and Engineering: Innovation/Production**
Fall odd years. Design, implement, and evaluate activities for teaching Technology Education based upon the Standards for Technology Literacy. Use a variety of effective teaching practices that enhance and extend learning of technology through STEM (science, technology, engineering, mathematics). Plan activities that promote technological literacy and communicate effectively with diverse learners. Student projects will involve the use of design challenges in a laboratory setting. The main emphasis will center on invention, manufacturing, and construction.

**TE 4620 (3)**
**Career and Technology Education in Elementary Schools**
Fall odd years. Development and evaluation of instructional activities to facilitate career development and understanding of technology among elementary children. Extra fee.

**TE 4770 (2)**
**Technology Education Practicum**
Fall. On-campus classes to initiate Practicum content and requirements. Field experience in local schools to familiarize students with Technology Education teaching responsibilities, including planning, instruction, assessment, and classroom management, as well as school administration and policies, teacher duties, and student organizations.
TE 4900(1 - 3)
Problems in Technology Education
For advanced students wanting to conduct intensive study of selected problems in technology education. May be repeated. Prerequisite: consent of college.

TE 4970(1 - 16)
Student Teaching
Spring. Classroom teaching under supervision on full-day basis. Conferences and seminars supplement program. Required of students in secondary school or special certification program. Eligibility requirements must be met. C/F hrs.: 30 hrs/week. May be repeated. Graded S/U. Concurrent with TE 4490.

Subject: Technology
TECH 1010(3)
Technology I
Fall, Spring, Summer on demand. Communication processes and methods defined by the technology system model. Problem solving techniques introduced and developed. Students use several application software packages on microcomputers to solve communication problems. No prerequisites.

TECH 1900(1 - 3)
Special Topics
For students wanting to study selected techniques, or applications. May be repeated if topics vary but no more than 3 hours may be applied to any associate degree program.

TECH 2230(3)
Mechanical Power Transmission
Fall. Mechanical drive systems and applications. Design, operation, maintenance of mechanical power systems used in industry. One and one-half hour lecture and three hours laboratory. Extra fee.

TECH 2260(1 - 3)
Quality Systems
A study of selected topics related to industry, military, national, or international quality systems and standards. May be repeated if topics differ. One hour lecture.

TECH 2800(1 - 3)
Developments in Technology
New developments in technology, as related to studies in the College of Technology, that impact on labor, management, equipment, materials and systems. May be repeated with approval of adviser.

TECH 2890(4)
Cooperative Education
Fall, Spring, Summer. Work and study in business, industry, service or government agency in college-approved, paid, full-time position related to student's intended areas of concentration. A minimum of 520 hours of employment during one semester is required. Prerequisites: consent of department and successful completion of co-op workshop. Graded S/U.

TECH 2900(1 - 3)
Studies in Technology
For students wanting to conduct intensive study of selected problems in technology as related to a specific discipline. May be repeated up to 6 credits if topics vary.

TECH 2910(1 - 3)
Field Experience
Paid work activity in an appropriate technology environment related to an occupational objective. One credit requires 180 hours of work. May be repeated to three credits. Prerequisite: permission of site supervisor and adviser.

TECH 3020(3)
Technology Systems in Societies
Current issues and their relationship to technology and systems in various cultures throughout the world; emphasis on explaining technological behaviors, and on showing how technology permeates all human affairs. Two one-and-one-half hour lectures per week. Prerequisite: junior status or consent of instructor. Applicable to the BG Perspective (general education) social sciences and international perspective requirements.

TECH 3030(3)
Instructional Design and Delivery
Learning styles, reading levels, philosophies of learning and education, instructional delivery methods, instructional techniques and evaluation instruments.

TECH 3100(3)
Computer-mediated Communications in Training and Education
On demand. Introduces students to computer-mediated communications and applications within training and education today. Focus is on the application of networking technologies and resources that support high-quality, interactive instruction in both face-to-face and at-a-distance learning environments.

TECH 3200(3)
Adult Learning in Technological Settings
Introduction to adult development theory and related implications for adult learning, design elements from assessment through evaluation and identification of roles and responsibilities of educators and learners in various environments.

TECH 3890(4)
Cooperative Education
Fall, Spring, Summer. Work and study in business, industry, service or government agency in college-approved paid, full-time position related to student's area of concentration. A minimum of 520 hours of employment during one semester is required. Prerequisites: TECH 2890 and consent of department. Graded S/U.

TECH 3950(1 - 3)
Technology Workshop
Intensive educational experience in a specialized technology. Typically an all-day or concentrated format.
Requirements usually completed within time format. May be repeated.

TECH 4020(3)
Innovation in Technology
Techniques and procedures involved in innovation and experimentation related to technology; emphasis on product and prototype innovation, experimentation, problem solving, research and development, diffusion and adoption of innovations. Prerequisite: junior status or consent of instructor.

TECH 4030(3)
Evaluation and Assessment within Technology
Principles and procedures used in the measurement, evaluation, and assessment of educational programs involving individuals, groups, programs, and systems within a technology setting.

TECH 4150(3)
Instructional Materials Development
Instruction in the organization, design, preparation, and application of technology-based teaching materials. Emphasis is on the underlying theories of instructional materials selection and development, instructional design, visual communication, and instructional materials production processes.

TECH 4210(3)
Technological Forecasting
On demand. Examining different technologies and technology systems, as they pertain to the information technology (IT) industry and additional industries; determining how these technologies will be used, what kind of demand there may be for them, and some of the positive and negative consequences of implementing them. Prerequisites: TECH 3020 and TECH 3100, or by permission of instructor.

TECH 4220(3)
Information Policy Analysis
On demand. Examining current and pending federal and state legislation that impacts how electronic information (audio, video, and text) is disseminated; exploring the political, cultural, economic, and social aspects of these policies as they pertain to information and technology. Prerequisites: TECH 3020 and TECH 3100, or by permission of instructor.

TECH 4230(3)
Digital Rights Management Perspectives
On demand. Examining current and pending rights models used to secure digital content; examining the implications Digital Rights Management (DRM) schemes carry with them, and their impact on the flow of electronic information in modern societies. Prerequisites: TECH 3020 and TECH 3100, or by permission of instructor.

TECH 4240(3)
Media Usability Studies
On demand. Examination of the usability of computer-based device interfaces and the accomplishment of human tasks, thinking critically about how information is presented; attention to hardware and software user interfaces, user-centered evaluation processes, usability engineering, educational uses of computers, and computer-supported cooperative work. Prerequisites: TECH 3020 and TECH 3100, or by permission of instructor.

TECH 4280(3)
Development of Training Programs
Design, production and evaluation of training programs for industry and business. Job analysis, task analysis, instructional design and cost analysis in development of training programs.

TECH 4380(3)
Supervisory Practices in Technological Settings
This course examines the supervisory practices and procedures administered in technological settings, with an emphasis on planning, organizing, and controlling employee activity in these unique work environments. TECH 4380 has been developed and approved for online delivery.

TECH 4480(3)
Transformational Learning and Technology
Developing an understanding of technology systems as political, economic, and social entities that have multiple goals; using that understanding as a framework for the development of educational adoption events that promote transformational learning during introduction and application of new technologies. Prerequisites: TECH 3020 and TECH 3100.

TECH 4800(1 - 3)
Topics in Technology
Current trends and developments in industry and business, particularly as they have significance to equipment, materials, processes, systems and facilities related to the education of technologists. May be repeated on approval of adviser.

TECH 4890(4)
Cooperative Education
Fall, Spring, Summer. Work and study in business, industry, service or government agency in college-approved, paid, full-time position related to student's intended areas of concentration. May be repeated to eight hours. A minimum of 520 hours of employment during one semester is required. Prerequisites: TECH 3890 and consent of department. Graded S/U.

TECH 4900(1 - 3)
Problems in Technology
For advanced students wanting to conduct intensive study of selected problems in technology. Prerequisite: consent of college. May be repeated. Graded S/U.

TECH 4950(4)
Technical Research Project
All terms. Departmental approved and supervised industrial or technical applied research, with a written technical report and presentation in seminar or other format. May be substituted as equivalent to TECH 3890 or TECH 4890 cooperative education experiences. May be repeated. Graded S/U.
Subject: Theatre & Film

THFM 99(0)
Major Event Participation
Fall. Required once of all Theatre and Film Majors of sophomore or junior standing and once of all Theatre and Film Majors in their senior year. Students will take part in a professional adjudicated audition/interview process scheduled at the end of the fall semester. Graded S/U.

THFM 1000(1)
Production Participation: Acting I
Fall, Spring. Studio course for students participating as an actor in departmental productions. May be repeated to 4 hours. No more than 3 hours total of THFM 1000 and THFM 3000 apply to the Theatre degree. Prerequisite: Students must be cast in a departmental production and gain consent of Department of Theatre and Film.

THFM 1010(1)
Production Participation: Tech I
Fall, Spring. Studio course for students participating as a technician in departmental productions. May be repeated to 4 hours.

THFM 1380(1)
Solo and Ensemble Theatre Performance Activities I
Fall, Spring. Individualized instruction and experience in contest or festival preparation for solo, duet, or ensemble acting, including orations and oral interpretation. May be repeated to two credits.

THFM 1410(3)
The Theatre Experience
Fall, Spring, Summer. Art of theatre; heritage and contemporary values as humanistic discipline; importance as social/cultural experience; opportunity for some involvement in theatrical activities. Laboratory hours required. Applicable to the BG Perspective (general education) humanities and arts requirement.

THFM 1470(2)
Basic Scenery Construction, Props and Scene Painting
Fall. Tools, equipment and techniques used in basic scenery construction, including stock 2-D and 3-D units, weight bearing scenery, properties and basic scene painting techniques. Emphasis is placed on practical application through the department's production program. Laboratory hours required.

THFM 1480(2)
Basic Costume Construction
Spring. Tools, equipment and techniques used in basic costume construction, including materials and fabrics, basic stitches, patterning, draping, dying and distressing. Emphasis is placed on practical application through the department's production program. Laboratory hours required.

THFM 1500(2)
Drafting, Drawing, and Graphics for Theatre and Film
Fall. Tools and techniques used in drawing and rendering for scenic, costume, and lighting designers. Emphasis is placed on realistic depiction, thumbnail sketching, graphic conventions, and skills development. Mechanical perspective included. No prior drawing coursework required. Studio work required.

THFM 1610(3)
Introduction to Film
Fall, Spring, Summer. Various approaches to looking at films and writing about them. Essential elements of film production, such as editing, sound and composition, camera work, and film genres explored through viewing and discussion of representative films. Introduction to aesthetic and structural languages of film as an art form. Applicable to the BG Perspective (general education) humanities and arts requirement. Extra fee.

THFM 1910(3)
Script Analysis
Fall, Spring. Methods of reading, studying, and analyzing scripts for production on stage and screen. Concentration as script as vehicle for performance and the understanding of it from the perspective of the actor, director, designer, and technician.

THFM 2020(3)
Performance Studies I
Fall, Spring, Summer. Introduction to the solo performance of literature (poetry, prose, oral history). Emphasis on textual analysis as well as vocal and physical techniques of performance. Applicable to the BG Perspective (general education) humanities and arts requirement.

THFM 2150(3)
Exploring Cultural Diversity Through Performance
Fall, Spring. Through performance and discussion of selected public and private texts written by American minority writers, this course explores what it means to be a part of a culturally diverse society. Applicable to the BG Perspective (general education) cultural diversity in the United States requirement.

THFM 2400(3)
Performance for Entrepreneurs
Fall or Spring. Explores concepts, skills and strategies to aid entrepreneurs in more fully engaged and effective communication. The focus is on exploring acting tools, which increase the entrepreneur's awareness of self and others, communication skills, use of imagination for creating new possibilities, and risk taking.

THFM 2410(3)
Acting: Principles
Fall, Spring. Basic techniques of acting applied to creating contemporary characters in realistic situations;
imaginative, emotional and sensory responsiveness.

**THFM 2420 (3)**
**Acting: Topics in Voice and Movement**
Fall or Spring. Developing the actor's voice and body as major tools of expressiveness, expanding physical and/or vocal flexibility and range. Topic varies. May be repeated to 12 hours if topics differ, on approval of adviser.

**THFM 2550 (3)**
**Film I: Cinematography**
Fall, Spring. Theory and techniques of cinematography. The technical and aesthetic aspects of light, shadow, color, film stock, lens choice, and lighting design. Projects in still photography and 16mm motion pictures. Laboratory hours arranged. Prerequisites: THFM 1610, THFM 1910, THFM 2620. Extra fee.

**THFM 2560 (3)**
**Film II: Editing, Image, and Sound**
Fall. Theory and techniques of editing, sound recording, and sound design for film. Juxtaposition of images, sound-image relationships, structure, pacing, and rhythm of film images. Use of microphones, recorders, 16mm editing equipment, and nonlinear digital editing software. Laboratory hours arranged. Open to BA Film-Production Specialization students only. Prerequisites: THFM 1610, THFM 1910, THFM 2550, THFM 2620. Extra fee.

**THFM 2620 (3)**
**History of Film**
Fall, Spring. History of film making, representative artists, genres, and innovation in commercial as well as experimental film.

**THFM 2750 (3)**
**Arts Management I**
Fall. Provides skills necessary to work as an arts administrator or to manage artistic work. Students gain a clear understanding of the difference between for-profit and not-for-profit arts organizational structures. Topics include: Leadership, Human Resources, Marketing, Development, Systems, Finance and Legal Issues in the arts.

**THFM 2900 (1 - 3)**
**Studies in Theatre and Film**
Fall, Spring, Summer. For the intermediate student who wishes to do independent study, through a faculty advisor, on a variety of topics. May be repeated. Prerequisite: consent of the theatre and film department.

**THFM 3000 (1)**
**Production Participation: Acting II**
Fall, Spring. Studio course for advanced students participating as an actor in departmental productions. May be repeated to 4 hours. No more than 3 hours total of THFM 1000 and THFM 3000 apply to the Theatre degree. Prerequisite: Students must be cast in a departmental production and gain consent of Department of Theatre and Film.

**THFM 3010 (1)**
**Production Participation: Tech II**
Fall, Spring. Studio course for advanced students participating as a technician in departmental productions. May be repeated to 4 hours.

**THFM 3020 (3)**
**Performance Studies II**
Spring. Exploration of various forms of solo performance, such as performance in social context, the one-person show, or specialized literary or genre study. (Shakespeare, modern poetry, southern fiction). Topics to be announced. May be repeated for six hours. Prerequisite: THFM 2020 or consent of instructor.

**THFM 3300 (3)**
**Theatrical Makeup**
Fall. Theory and application of makeup for stage, television and film, corrective and character makeup; prosthetics; facial hair.

**THFM 3380 (1)**
**Solo and Ensemble Theatre Performance Activities II**
Fall, Spring. Individualized instruction and experience in contest or festival preparation for solo, duet, or ensemble acting, including orations and oral interpretation. May be repeated to two credits.

**THFM 3400 (3)**
**Creative Drama**
Fall, Spring. A hands-on experience in the use of drama in nonperformance situations. Drama as a stimulus for creativity and problem solving in preschool, elementary and secondary classrooms and in other settings. Theory and practice of improvisation, pantomime and story dramatization.

**THFM 3410 (3)**
**Directing**
Fall, Spring. Theory and techniques of play direction. Each student directs a short scene. Laboratory hours arranged. Prerequisites: THFM 1910, and THFM 2410 or THFM 1500, or consent of instructor.

**THFM 3420 (3)**
**Advanced Directing**
Spring. THFM 3410 continued. Each student directs at least one short play or series of short scenes. Prerequisite: THFM 3410. Laboratory hours arranged.

**THFM 3440 (3)**
**Acting: Character and Range**
Alternate years. In depth study of character development for a variety of performance contexts and for broadening range of roles and performative choices. Prerequisites: THFM 1910, THFM 2410, and THFM 2420, or consent of instructor.

**THFM 3450 (3)**
Acting: Topics and Applications
Alternate years. Intensive lectures/studio examining a specific topic, style or range of acting styles. May be repeated to six hours if topics differ, on approval of adviser. Prerequisites: THFM 1910, THFM 2410, and THFM 2420, or consent of instructor.

THFM 3470(3)
Theatre History and Literature: Origins-1700
Fall. History of theatrical production, major dramas and dramatists from primitive time through 1700. Applicable to the BG Perspective (general education) humanities and arts requirement.

THFM 3480(3)
Theatre History and Literature: 1700-Present
Spring. History of theatrical production, major dramas and dramatists from 1700 to the present. Applicable to the BG Perspective (general education) humanities and arts requirement.

THFM 3500(3)
Milestones in Black Theatre
Spring. Read, research and discuss/report on the aesthetics, dramatic intent, historical significance and production history of milestone black plays.

THFM 3520(3)
Musical Theatre
On demand. History, theory and staging techniques of musical theatre production in the United States.

THFM 3550(3)
Film III: Sync Sound Production
Spring. Theory and techniques of live action film production. Collaboration with actors, visual interpretation, sync sound recording, production management, digital and analog sync sound editing. Class works as creative team on production of short film. Laboratory hours arranged. Open to BA Film-Production Specialization students only. Prerequisites: THFM 1610, THFM 1910, THFM 2550, THFM 2560, THFM 2620. Extra fee.

THFM 3600(3)
Tree House Troupe--Rehearsal
Spring. Rehearsal/Workshop development period prior to tour to NW Ohio public schools. Students will be in rehearsal two days a week, Tuesday and Thursday. Enrollment limited to students cast in the Tree House Troupe productions. Auditions are held each year during the fall term. See department for audition dates. Concurrent enrollment in THFM 3610 required.

THFM 3610(3)
Tree House Troupe--Tour
Spring. Tour of two productions and workshops to NW Ohio public schools. Students will be off campus two days a week, Tuesday and Thursday. Enrollment limited to students cast in the Tree House Troupe productions. Auditions are held each year during the fall term. See department for audition dates. Concurrent enrollment in THFM 3600 required.

THFM 3650(3)
Culture and the Moving Image
Fall, Spring. Advanced analysis of film that integrates knowledge acquired in Introduction to Film, Script Analysis, and History of Film. Analysis involves: formalist, ideological, auteur, genre, national cinema, film history, political economy, and audience reception approaches. Prerequisites: THFM 1610, THFM 1910, THFM 2620.

THFM 3750(3)
Arts Management II
Spring. Second course in the arts management sequence. Focus on honing real world skills for the not-for-profit arts administrator through in depth study of the areas of marketing and development, the balance between earned and contributed revenue, developing the tools to create a not-for-profit arts organization, and the ability to effectively develop an arts organization's business plan.

THFM 3920(3)
Film: From Concept to Distribution

THFM 3930(3)
Workshop on Current Topics
Intensive educational experience on selected topics. Typically, an all-day or similar concentrated time format. Requirements usually completed within time format. May be repeated if topics differ, on approval of adviser.

THFM 4400(3)
Theatre for Young Audiences
Fall. Producing plays for child audiences; application of concepts of child development to aesthetic problems of theatre for young audiences, through reading, discussion and participation.

THFM 4420(3)
Screenwriting

THFM 4430(3)
Playwriting
Fall. Writer's workshop involving creation and production of original play for stage; discussion of process of playwriting and mounting a play for production. May be repeated.
THFM 4440(3)
Acting and Directing for Film
On demand. Theory and techniques of creating performances for film. Points of contact between stage and screen as well as specific adjustments and requirements for working in film. Emphasis on script analysis, rehearsal methods, collaboration between actors and directors. Readings, screenings, taped exercises, collaborative projects. Prerequisites: THFM 2410, THFM 2550, or THFM 2620.

THFM 4450(3)
Acting: Songs and Arias
On demand. Precepts of acting are applied to songs and/or arias in order to open the physical and emotional options available to performers as they sing. Prerequisite: junior standing or consent of instructor.

THFM 4460(1 - 6)
Summer Theatre Performance
Summer. Intensive laboratory work in study, preparation and development of roles. Particular problems of performance in summer theatre. Prerequisite: consent of theatre and film department. May be repeated.

THFM 4480(1 - 6)
Summer Theatre Production
Summer. Intensive laboratory work in scenery construction and painting, stage lighting, organization and operation of backstage crews and technical theatre. Particular problems of technical production in summer theatre. Prerequisite: permission of the theatre and film department. May be repeated.

THFM 4490(3)
Contemporary Issues in Theatre
Seminar for advanced students. Specific topics vary and depend on current trends in world theatre as identified by students and faculty members. Prerequisite: consent of instructor. May be repeated.

THFM 4500(1 - 6)
Summer Theatre Management
Summer. Intensive laboratory work in various aspects of theatre management; publicity, box office, house management, public relations. Particular problems of management of summer theatre. Prerequisite: consent of the theatre and film department. May be repeated.

THFM 4590(3)
International Puppetry: Traditions and Innovations
Spring. This course provides an overview of the traditional genres, literature, and significant contemporary artists within the puppetry discipline.

THFM 4600(3)
Period, Style and Form
Fall. Historical overview of decorative arts in their social context for application in productions.

THFM 4610(3)
Puppets and Masks: Design and Craft
Fall. This course introduces students to the design approaches, construction techniques and materials necessary to produce masks and puppets for theatrical purposes.

THFM 4620(3)
Puppetry Performance
On demand. This course introduces students to a variety of puppet manipulation and performance techniques suitable for presentation before a live audience.

THFM 4630(3)
Lighting Design
Fall. Theories and techniques of lighting stage productions; lighting instruments and equipment. Prerequisite: THFM 1490 or permission of instructor.

THFM 4650(3)
Stage Management
Spring. Practical approach to the tools and techniques involved in stage management for drama, musicals, ballet and dance, and opera; including building prompt scripts, sight reading musical scores, dance notation, and basic music and dance terminology.

THFM 4660(3)
Scene Design
Spring alternate years. Study in scenic design for the stage and screen. Dramatic action as organic element in design. Effects of line, mass, color, and texture on the scenic environment. Lab work on University productions required.

THFM 4670(3)
Scene Painting
On demand. This course introduces students to the techniques of using paint to simulate a variety of materials as well as to scale up renderings and found images to create theatrical backdrops.

THFM 4680(3)
Animated Films: An International History
Spring. The animated film allows artists to directly share dreams and visions with a wider audience. While feature-film cel-based (and now often digitally rendered) cartoons have long dominated animation in the United States, other genres (including paper animation, clay animation and various experimental forms) have enjoyed popular acceptance in other countries. Through lectures, discussions, and screenings, this course will trace historic innovations in the design, technical, and narrative aspects of film animation throughout the world.

THFM 4690(3)
Costume Design
Basic principles of costume design for the stage, television, and film. Development and rendering of design concepts; use of historic, stylistic, and fantasy elements in character realization.
Advanced Production Practicum
Fall, Spring, Summer. A closely supervised significant production assignment for a major production, such as directing, acting in a major role, or a design or stage management assignment. Heavy production participation commitment. Prerequisite: Advanced acting, directing, stage management, scenic, costume or lighting design as applicable to the project; and permission of the department. (See department for petition to enroll.)

THFM 4850(3)
Topics in Film, Theatre, and Performance Studies
On demand. Readings in theoretical, historical, aesthetic, and cultural perspectives on topics in film, theatre, and performance studies. Key concepts outlined by instructor and assigned readings contextualized and amplified by electronic discussions, independent screenings, academic and field research. May be repeated if topics differ.

THFM 4880(1 - 12)
Theatre and Film Studio Experiences
Fall, Spring. Faculty supervised practical experience in theatre or film. Contract-based study of theatre or film principles in on-campus production related experiences. Student must be recommended by adviser and approved by chair of theatre and film department. May be repeated for up to 12 hours. Graded S/U.

THFM 4890(1 - 12)
Theatre and Film Internships
Fall, Spring, Summer. Supervised field experience in theatre or film. Contract-based study of theatre or film principles as intern in public or commercial production company. Student must be recommended by adviser and approved by chair of theatre and film department. May be repeated for up to 12 hours.

THFM 4900(1 - 3)
Problems in Theatre and Film
Fall. Faculty supervised practical experience in theatre or film. Contract-based study of theatre or film principles as intern in public or commercial production company. May be repeated. Prerequisite: consent of department.

THFM 4980(2)
Senior Seminar in Theatre and Film
Fall. Exploration of the learning/life skills inherent in the study and practice of theatre and film. Major Event participation required. Prerequisite: senior standing and THFM 99.

Subject: University Studies
UNIV 1000(2)
University Success
Fall, Spring. Introduction to higher education. Development of skills in oral and written communication, time management, interpersonal relations, personal wellness, library research, and studying/test-taking. Awareness of social issues such as AIDS, alcohol and substance abuse, acquaintance rape, and race relations.

UNIV 1010(1)
Freshman Interest Group
Fall. Prepares students for academic success in two linked courses in an area of the student's prospective major. Focus on learning strategies and skills in critical thinking, test taking, communication and inquiry relevant to the courses.

UNIV 1100(2)
Student Success Seminar
Fall, Spring. Structured academic support system for continuing students participating in the Student Support Services program. Enhancement of competencies necessary for success at the University.

UNIV 1110(1)
Springboard
Fall, Spring. A dynamic self-development course that engages first-year students in the learning process and builds self-assurance by enabling them to assess their proficiency and plan strategically for growth in Investigation, Connection, Presentation, Writing, Participation, and Leadership.

UNIV 1200(1)
Learning-Behavior Assessments
Fall, Spring. A variety of instruments will be used to assist students with their personal, career, and learning concerns. This is an academic counseling course for students who participate in the Center for Multicultural and Academic Initiatives (CMAI) programs. Repeatable up to 4 credits. Prerequisite: permission from CMAI.

UNIV 1290(1)
Career Planning
Strategies developed for career and life planning decisions. Occupational choice theory, assessment of values, needs, interests, and skills helpful in selecting an academic major and relating that major to a career. Investigation of occupations and issues affecting career choice.

UNIV 1300(1)
Job Search
Strategies developed for job search and preparation. Skills in preparing resumes, job applications, cover and thank you letters, networking, and interviewing.

UNIV 1310(2)
Career and Life Planning
Fall, Spring, Summer. Helps students examine their skills, interests, values and personal characteristics; investigate occupations and career paths; examine the interrelationship between self-knowledge and occupational decisions; identify academic programs and experiential learning opportunities that enhance future employment options; make informed career and life decisions; and establish realistic goals and an action plan. Extra fee.

UNIV 1410(2)
EAP Strategies for Effective Work Performance
Fall, Spring. The course assists students with securing an internship. Course content includes the theory, practical knowledge, and skills required to perform effectively in the workplace including essential professional competencies. Prerequisites: Open to first, second, and third-year students only.

UNIV 2010(2)
Orientation Training
Fall, Spring. Introduction to issues, challenges, student development theories, support services associated with the freshman year of college. Development of oral and written communication skills, teaching techniques, presentation skills, and an understanding of higher education and Bowling Green State University.

UNIV 2020(2)
Practicum in Orientation
Fall, Spring. Participants co-facilitate an orientation course for freshmen, plan and present class sessions, promote awareness of campus resources, meet weekly with their co-facilitators, serve as peer adviser, evaluate the program and their experience, and attend training events. May be repeated.

UNIV 2100(1)
Residence Life for the Paraprofessionals
Fall, Spring. Knowledge, skills, competencies needed to effectively fulfill the responsibilities and role of the paraprofessional in a university residence hall setting. Instructor permission required. May be repeated up to 2 hours.

UNIV 2110(1)
Upper Springboard
Spring. Utilizing and polishing the core skills of Investigation, Connection, Presentation, Writing, Participation, Leadership in a wide variety of academic and real-life contexts. Participants serve as peer mentors. Prerequisite: UNIV 1110.

UNIV 2200(1)
Seminar for the Student Leader
A leadership course for students in organizations that will enhance effectiveness as a student leader by exploring the influence of values on the leadership process, the environment in which student organizations operate, and students' philosophy on leadership. This course is designed to be a reflective experience that integrates classroom learning as well as application to out of class involvement. No prerequisites or special fees.

UNIV 3100(1)
Seminar in Residence Life
Spring. Expands knowledge and skill level of experienced paraprofessional. Problem solving activities, role playing, case studies used to address issues of the residential environment. Instructor permission required. May be repeated up to 2 hours.

UNIV 3310(3)
Career Implementation
Fall, Spring. Explore occupational and academic prospects. Develop an understanding of career decision making process, world of work, job search strategies, and employability issues. Juniors and Seniors only.

UNIV 4010(1 - 15)
Independent Studies
Fall, Spring, Summer. Open to any sophomore, junior or senior with a 2.5 GPA and participating in the Washington Center Internship Program. Contact the Cooperative Education and Internship Program before registration. Graded S/U.

UNIV 4100(1)
Advanced Residence Life for the Paraprofessional
Spring. Experienced paraprofessional is teamed with full-time professional in group discussion format. As facilitator with groups of potential paraprofessionals, focus on skills and competencies needed for success. Instructor permission required. May be repeated up to 2 hours.

UNIV 4110(1)
Springboard Coaching
Fall, Spring. Mentoring skills are developed by coaching a first-year student through experiential learning activities designed to improve skills in the University's Learning Outcomes: Investigation, Connection, Writing, Presenting, Participation, and Leadership. May be repeated. Prerequisite: Sophomore standing or above, 2.5 GPA or permission of instructor.

Subject: Visual Communications Technology

VCT 1030(3)
Introduction to Visual Communication Technology
Fall, Spring. This course provides an introduction to visual communication theory and processes. Students are exposed to multi-media development, video production, photography, and printing techniques as they relate to solving communication problems. Extra fee.

VCT 1040(3)
Problem Solving for Visual Media
Overview of the visual problem solving process and how it applies to the diverse formats used in visual communication technology. Focus is on problem solving that stimulates visual thinking. Includes visual problem solving analysis, freehand sketching and the application of design, using computer based vector and raster solutions. The use of orthographic projections, isometrics and multi-point perspective will be reviewed. Four and one-half hours of lecture/laboratory. Extra fee.

VCT 2040(3)
Concepts of Visual Communication
Fall, Spring. Advanced visual communication concepts including problem solving, research, ideation, design, script writing, storyboarding, training techniques, proposal preparation, cost estimating and analysis. Overall project management techniques and environmental factors covered in depth. Four hours lecture and laboratory. Prerequisite: VCT 1030 or instructor approval. Extra fee.

VCT 2080(3)
Introduction to Print Media
Fall, Spring, Summer on demand. Major printing processes; concentrations in image design, digital image assembly, image carrier preparation and image transfer. All new print media will be explored. Four hours of lecture/laboratory. Suggested prior enrollment in VCT 1030 is recommended. Prerequisite: VCT 1040. Extra fee.

VCT 2660(3)
Introduction to Interactive Media
Introduction to basic interactive media concepts and techniques. Emphasis on basic design and production of effective media projects with a focus on network deployment. Prerequisites: VCT 1030.

VCT 2680(3)
Video Fundamentals
Fall, Spring, Summer on demand. Basic principles of single-camera video and audio production theory, process, and techniques. This course provides students with hands-on experience in planning, shooting, and editing video presentations. Students are required to provide their own video camera. Four hours of lecture/laboratory. Extra fee.

VCT 2820 (3)
Photography I
Fall, Spring, Summer. Basic photographic and digital editing techniques. This course provides an introduction to camera handling, lighting exposure, and composition. Experiences include creating digital image files, digital editing and output techniques. Four hours of lecture/laboratory. Extra fee.

VCT 3040(3)
Display and Exhibit Technology
Fall. Display and exhibit industry from problem analysis through design and production to installation and evaluation. Overview of "high-tech" media used to stop audiences and create the desired outcome. Four hours of lecture and laboratory. Prerequisite: VCT 1030. Extra fee.

VCT 3080(3)
Fundamentals of Imaging Technology
Fall, Spring, Summer. Image/art preparation techniques for various publishing applications including print, CD ROM and other computer media. Digital imaging fundamentals of computer systems, type, graphic images and color. Four hours of lecture/laboratory. Prerequisite: VCT 3080 or instructor approval. Extra fee.

VCT 3090(3)
Image Preparation for Print Media
Fall. Study of imposition and image assembly and preparation for printing. Experiences in color proofing, plate preparation and process color printing are also provided. Four hours of lecture/laboratory. Prerequisite: VCT 3080 or instructor approval. Extra fee.

VCT 3100(3)
Advanced Print Media
Fall, Spring. Offset, screen, inkjet, flexographic, large format inkjet, digital and gravure image transfer examined. Integration of digital image preparation and the impact on transfer systems. Topics include quality control, problem solving, system management, production, industry trends and environment. Four hours of lecture/laboratory. Prerequisite: VCT 3090 or instructor approval. Extra fee.

VCT 3660(3)
Applied Interactive Media Production
Exploration and experimentation with a variety of interactive media presentation technologies. Following the design process, students will produce complex interactive media projects with an emphasis on distribution methods. Prerequisites: VCT 2660 or instructor approval. Extra fee.

VCT 3690(3)
Intermediate Video Production
Fall, Spring, Summer on demand. Intermediate principles of single-camera video and audio production techniques focusing on promotional and industrial forms of video production. Students will build on the concepts of video production theory, process and techniques learned in VCT 2680. Prerequisite: grade of C or better in VCT 2680. Four hours of lecture/laboratory. Extra fee.

VCT 3820 (3)
Photography II
Fall, Spring. Advanced camera handling, digital darkroom techniques and an emphasis on digital image capture and manipulation. Four hours of lecture/laboratory. Prerequisite: VCT 2820. Extra fee.

VCT 3860(3)
Animatronics Technology
Fall even years. Overview of the audio-animatronic industry including design, fabrication, programming, installation, maintenance and evaluation; various applications. Four hours of lecture/laboratory. Extra fee.

VCT 4560 (3)
Digital Color Applications
Spring. Basic color theory and color models as applied in color capture (scanning, photo, video) and output (monitors/videos, color printers, color separation). Color management as applied in color image processing is also studied. Four hours of lecture/laboratory. Prerequisite: VCT 3080 or instructor approval. Extra fee.

VCT 4600 (3)
Digital Photography
Research and experimentation in computer-generated digital imaging techniques. Four hours of lecture/laboratory. Prerequisite: VCT 3820. Extra fee.

VCT 4650(3)
Commercial Photography
Application of skills and knowledge pertaining to the professional field of commercial photography. Production requirements, studio management and the use of large format cameras and advanced lighting techniques in both B&W and color photography. Four hours of lecture/laboratory. Prerequisite: VCT 3820. Extra fee.
VCT 4670(3)
Visual Communication Technology Synthesis
Fall, Spring. Techniques of visual communication problem solving: project coordination, scheduling, cost and estimating for visual presentations; aesthetic and technical qualities of graphic presentation. Four hours of lecture/laboratory. Prerequisites: VCT 2080 and senior standing. Extra fee.

VCT 4690(3)
Advanced Video Production
Fall, Spring, Summer on demand. Advanced course in industrial video and audio production techniques, emphasis on non-linear editing. Includes multi-camera shooting and editing. Advanced audio and lighting techniques. Prerequisite: grade of C or better in VCT 3690. Four hours lab/lecture. Extra fee.

VCT 4820(3)
Advanced Concepts of Multimedia Production
Spring. In-depth examination and experimentation of multimedia concepts and tools. Integration of digital photography, imaging, computer applications of hardware and software, learning strategies, planning and evaluation. Four hours of lecture/laboratory. Prerequisites: VCT 3660 or instructor approval. Extra fee.

VCT 4900(1 - 3)
Problems in Visual Communication Technology
For advanced students wanting to conduct intensive study of selected problems in visual communication technology. May be repeated. Prerequisite: consent of college and instructor. Graded S/U. Extra fee.

Subject: Women's Studies

WS 2000(3)
Introduction to Women's Studies: Perspectives on Gender, Class and Ethnicity
Fall, Spring, Summer. Interdisciplinary survey of the new scholarship on women. Emphasis on the interconnectedness of gender, class and ethnicity in women’s experiences and viewpoints. Applicable to the BG Perspective (general education) cultural diversity in the United States requirement.

WS 2400(3)
Special Topics in Women's Studies
Fall, Spring. Topics of interest in studying women in subject area not offered in regular college course offerings. May be repeated twice, if topics differ. No prerequisite.

WS 2730(3)
History of Feminist Thought and Action
Spring. Historical survey of feminist theorists who have challenged and advocated changes in traditional ways of thinking about women's diverse social, sexual, racial, theological, class-specific status in society. Prerequisite: WS 2000 or permission of instructor.

WS 3000(1 - 4)
Topics in Women's Studies
Fall, Spring. Topics of interest in studying women in subject area not offered in regular college course offerings. May be repeated twice if topics differ. No prerequisite.

WS 3010(3)
Women, Art and Culture
Fall. Women's creativity and cultural production in the visual, literary and performing arts, and their relationships to broader cultural issues, including cross-cultural perspectives. Prerequisite: WS 2000 or consent of instructor.

WS 3050(3)
Women of Color in the United States
This course explores how race, gender, class, sexuality, and religion intersect and converge in shaping the lives of women of color in the United States. It emphasizes the diversity of experience of women of color as they resist and contest the material and cultural constraints that limit them. The course also focuses on women of color as agents of social and political change, and provides perspectives on the ways in which women of color shape and define American institutions and society. Credit allowed only for one of ETHN 3050 or WS 3050.

WS 3060(3)
Psychology of Gender
Psychological characteristics of women and men; personality, adjustment, identity formation, intellectual processes, sexuality; theories and data on gender development. Credit allowed only for one of WS 3060 or PSYC 3060.

WS 3130(3)
Contemporary Global Feminisms
Fall. Exploration of contemporary transnational and third wave feminist theory and activism. There will be an emphasis on contemporary feminist philosophies around the world, particularly in non-Western cultures, and third wave and transnational feminist issues. Prerequisite: WS 2730.

WS 3270(3)
Women in Modern Europe
Fall alternate years. Examination of women in Europe since 1750. Emphasis on changes in women's working, family, sexual and political lives in conjunction with Europe's economic and political modernization. Credit not given for both WS 3270 and HIST 3270.

WS 3350(3)
Women and Interpersonal Violence
Fall. An interdisciplinary examination of violence against women, including etiology and intervention, in the US and globally. Feminist and cultural perspectives will be used to interpret the research on interpersonal violence.

WS 3440(3)
African Women
An interdisciplinary exploration of the lives and experiences of women in Africa. Topics covered will include an historical overview; intersections among gender, politics, economics, nation, and religion; and
representations of African women. Credit allowed only for one of WS 3440 or ETHN 3440.

WS 3710(3)
Gender & Practice in Community-Based Work
Fall. A service learning course which prepares students for career and internship experiences in community-based work and the non-profit sector. Topics include: theories of management and feminist leadership including, work in feminist organizations, non-profit management, resource development and grant writing, advocacy and activism, outreach and public relations, group dynamics and teamwork.

WS 4000(3)
Advanced Topics in Women's Studies
Fall. A service learning course which prepares students for career and internship experiences in community-based work and the non-profit sector. Topics include: theories of management and feminist leadership including, work in feminist organizations, non-profit management, resource development and grant writing, advocacy and activism, outreach and public relations, group dynamics and teamwork.

WS 4010(3 - 4)
Practicum in Women's Studies
Fall, Spring. In-depth study of specific topic in women's studies scholarship or feminist criticism and theory. May be repeated if topics differ. Prerequisite: WS 2000 or permission of instructor.

WS 4330(3)
Theories of Othered Bodies
Spring. Exploration of bodies that are culturally constructed as Other; the ways bodies are constructed, disciplined, and regulated by culture; and how individuals and groups resist cultural definitions of "appropriate" bodies.

WS 4450(3)
Women's Sexualities
Spring. An interdisciplinary examination of women's sexuality, including eroticism, desire, body image, and the influence of personal identities and cultural politics on women's sexual behaviors, attitudes, and experiences.

WS 4600(3)
Sociology of Gender
Theoretical and empirical literature on family and sex roles; socialization, changing nature of women's and men's roles, and prospects for future. Institutional sources of women's and men's roles in other cultures. Credit allowed only for one of SOC 4600 or WS 4600.

WS 4670(3)
Gender, Media & Culture
On demand. This course examines mass media as work place, cultural forum, and the force of social change for women, men, and sexual minority groups. Junior standing required. No credit for both WS 4670 and TCOM 4670. Applicable to the Bd Perspective (general education) cultural diversity in the United States requirement.

WS 4680(3)
Reproductive Health and Politics
Spring. Interdisciplinary exploration of the complex cultural, ethical, and political issues surrounding human reproduction in the U.S. and globally, emphasizing the intersectionality of gender, sexuality, race, and socioeconomic status.

WS 4700(1 - 3)
Independent Study in Women's Study
Fall, Spring. Study project to be designed by student and member(s) of women's studies faculty in subject area not offered in regular course offering. Prerequisite: junior or senior standing or permission of instructor. May be repeated.

WS 4990(3)
Senior Thesis in Women's Studies
Capstone course for Women's Study majors. An original research project on a topic of interest in Women's Studies. The final project will result in a written manuscript and oral presentation. Prerequisite: a research methods course (approved by WS advisor) and consent of the instructor. Senior standing required.