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)

Arabic numbers following the title of a course indicate 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.

**ACCT Accounting**

**ACCT 2000 Accounting Concepts for Nonbusiness Students (3).** 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. Approved for distance education.

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


**ACCT 3310 Intermediate Managerial Accounting (3).** Cost concepts, analysis, and product/service costing methods. Discussion of the information needs and corresponding analyses for the planning, decision-making, and performance evaluation functions of managers. Prerequisites: STAT 2120 or STAT 2200.

**ACCT 3410 Individual Income Taxation (3).** 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 Intermediate Financial Accounting II (3).** 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 Accounting for Governmental and Not-for-profit Entities (3).** 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 Advanced Managerial Accounting (3).** A deeper examination of the conceptual issues impacting the information needs of managers in performing their planning, decision-making, and performance evaluation functions. Concepts from financial accounting, economics, operations research/statistics, finance, and organizational behavior are interwoven throughout the course. Credit can not be received in both this course and ACCT 5320. Prerequisite: Admission to the accounting specialization and grade of C or better in ACCT 3310, or consent of department.

**ACCT 4420 Corporate Income Taxation (3).** 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 Estate Planning (3).** 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 Auditing I (3).** 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 3210, or consent of department.

**ACCT 4560 Information Systems Auditing and Control (3).** 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 4400, or consent of department.


**ACCT 4890 Internship Seminar (1-3).** 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 Studies in Accounting (1-3).** 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.

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**ACEN Academic Enhancement**

**ACEN 1000 College Reading/Learning Skills (2-3).** 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 Transition Course (1).** Transition to University life through orientation to University facilities and options; activities stressing study skills and personal growth.

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**ACS American Culture Studies**

**ACS 1930Q Inquiry in Individuals and Society (3).** This course is an introduction to the topic of cultural pluralism. The course engages a substantial amount of reading material, questions, and controversies related to cultural pluralism and how it shapes individuals and societies with American and International Cultures. Students will be asked to learn about and to think critically about a variety of contemporary and historical social issues/controversies dealing with race, ethnicity, sexuality, and social inequality within American society and the world at large as these impact the individual and local and global communities.
ACS 2000 Introduction to American Culture Studies (3). 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 Issues in American Civilization (3). 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 Cultural Pluralism in the United States (3). 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 Indigenous Cultures of North America (3). 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 Interpretations of American Culture (3). 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. May be repeated once if topics differ. Applicable to the BG Perspective (general education) humanities and arts requirement. Approved for Distance Education.

ACS 3380 American Environmental History (3). 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 The Literature of American Culture Studies (3). 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. May be repeated once if topics differ. Approved for Distance Education.

ACT Accounting Technology

ACT 2250 Electronic Bookkeeping (3). 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; CS 1000 or MIS 2000 or permission of instructor.


ACT 2410 Cost Accounting I (3). 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 Federal Income Tax (3). 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.

AEC Associate Early Childhood

AEC 2000 Child Wellness (3). 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 2300 Developmentally Appropriate Approaches to Pre-K Teaching and Learning (3). Examines Developmentally Appropriate Practices (DAP) and curriculum development for all young children including early intervention/early childhood special education. Explores a variety of curriculum models. Focuses on planning DAP lessons and curricula using Ohio Department of Education Early Learning Content Standards. Emphasizes the instructional activities within play based environments to support the needs to every child. FE 20 hours.

AEC 2750 Child Care Administration (3). Factors in 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 Curriculum and Methods for Infants and Toddlers (3). 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 2900 Developmentally Appropriate Strategies to Supporting Positive Behavior (3). Classroom management strategies to support children’s prosocial participation in classroom environments. Analyze individual children’s social and behavioral development in classroom settings. Examine positive guidance strategies to support the developmental competencies of young children. Prerequisites: EIEC 1110, EIEC 2110, AEC 2300.

AEC 2910 Preschool Internship (3). 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: EIEC 1110, EIEC 2240, and EIEC 2300.

AERO Aerospace Studios

AERO 1110 Air Force Organization (2). 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 2110 Air Force History (2). 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 Air Force History (2). 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 Air Force Management (3). 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 Air Force Management (3). 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 American National Security (3). 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 American National Security (3). 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 Air Force Issues (1-3). AERO 4910 is only available to those students pursuing the Aerospace Leadership Minor. The course offers in-depth study (critical thinking) of national and DoD policy and how they impact military strategy, other elements of national power (diplomatic, information and economics) and specifically the Air Force. Offered to individuals in lecture, seminar and/or independent study. Contact hours range from one to three hours per week. Permission required from Chair, Department of Aerospace Studies.

AER Aviation Studies

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

AERT 2150 Aviation Ground Operations (3). 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 Private Pilot Ground School (4). 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 Private Pilot Flight Instruction I (2). 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 Private Pilot Flight Instruction II (2). 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 Air Traffic Control and the National Airspace System (3). Fall, Spring. A study of the nation’s air traffic control system. Focus on basic air traffic control procedures and regulations, FFA control facilities, FSS services, radio communication and navigation principles, safety, and new developments. Prerequisite: none.

AERT 2800 Instrument Ground School (3). 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 Basic Instrument Flight Instruction (3). 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 Advanced Instrument Flight Instruction (3). 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 Air Transportation (3). 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 Multiengine Ground School (1). 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 Commercial Ground School (3). Spring. (Formerly AERT 344). 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 Basic Commercial Flight Instruction (1). 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 Advanced Commercial Flight Instruction (2). 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 Digital Cockpit Instrumentation (2). 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 Airport Operations (3). Current practices in the operation, maintenance, management and safety of air carrier airports. Focus on airport certification requirements. Reviews organization and operation of major airport facilities. Prerequisite: Junior standing.

AERT 3490 Aviation Law (3). 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 Aviation Safety (3). 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 Aviation Management (3). 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 Airport Operational Plans (3). 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: AERT 3820 or concurrent enrollment.

AERT 4040 Advanced Aerodynamics and Aircraft Performance (3). 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 Advanced Aircraft Systems (3). 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 4350 Airport Administration (3). 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 Aviation Instructor Ground School (2). 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 Instructor or Flight Instructor-Airplane written exam must be passed. Prerequisite: AERT 3200.

AERT 4430 Flight Instructor-Airplane (3). 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 Flight Instructor-Instrument (1). 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 Flight Instructor-Multiengine (1). 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 Airport Planning and Design (3). 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 Safety Management Systems (3). 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 4680 Business Aviation (3). Capstone course that integrates a student's knowledge and skill in study of operations and management of business aviation companies. Focus on assessment and analyses of equipment, human resources, financial, economic and marketing requirements. Prerequisites: Senior Status.

AERT 4820 Flight Proficiency (1-3). 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 Problems in Aviation Studies (1-3). For advanced students wanting to conduct intensive study of selected problems in aviation studies. May be repeated. Prerequisite: consent of college. Graded S/U.

AFRS Africana Studies

AFRS 2000 Introduction to Africana Studies (3). 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.

AFRS 3000 Special Topics in Africana Studies (3). Fall, Spring, Summer. 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.

AFRS 4000 Africana Studies Capstone (3). 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.

AHS Applied Health Science

AHS 1010 Introduction to Health Professions (1). Survey of health and human service professions and the
AHS 3010 Medical Terminology (2). 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.

AHS 4010 Issues in Health Care Administration (3). 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.

AHS 4070 Case Studies in Health Care Administration (3). 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 Practicum (1-10). 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.

AHTH 95 Applied Basic Health Science (4). 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 1100 Medical Terminology (2). 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 Productive Interactions in Health Care (3). 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 Radiation Protection (1). 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 1030 Basic Anatomy (1). 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 Medical Terminology (2). 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 1200 Electronic Health Records Applications (1). An introduction to the electronic health record designed for the allied health professional. Course includes an overview of hybrid record systems, electronic record applications, personal health records and privacy and security basics applicable to all allied health majors. Approved for Distance Education.

AHTH 1290 Essentials for Human Anatomy and Physiology (4). 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 Basic Microbiology (3). Fundamentals of microbiology; emphasis on morphology, growth, genetics, pathogenic microorganisms and their control. Extra fee.

AHTH 1310 Basic Anatomy and Physiology for Allied Health (5). 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 Applied Physical and Chemical Principles for Allied Health (3). 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 Pharmacology for Allied Health (3). 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 Survey of Pharmacology (1). 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** Spanish for Healthcare Workers (2). 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 1600** Introduction to Medical Coding and Classification Systems (2). Introduction to the communication and statistical systems currently in use by health care facilities in order to provide reimbursement for services. Differentiation between structure of approved code sets and examination of coding compliance issues.

**AHTH 2300** Pathophysiology (4). 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 or BIOL 3310 and BIOL 3320.

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

**AHTH 3100** Allied Health Educator (3). This course will provide an overview of educational and training principles used by the allied health educator including: planning, methodology, implementation, assessment and evaluation of courses. Applied product development for the allied health setting of choice is also a focus. Junior status in an allied health major or permission of instructor.

**AMPD Apparel Merchandising/Product Development**

**AMPD 1510** Apparel and Textile Industry (3). Fall, Spring, Summer. 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. Approved for distance education.

**AMPD 1600** Twentieth Century Fashion (3). Fall, Spring. Development of fashion from the 1900s to present; emphasis on relationship of modern fashion to earlier forms of dress. Explore the social, economic, cultural, artistic, and technological themes as they relate to fashion. Prerequisite: AHTH 1510, AMPD major only.

**AMPD 2020** Merchandising Math (3). 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 1210 or higher.

**AMPD 2510** Fundamentals of Apparel (3). Fall, Spring. Understand the apparel production processes. Introduction to component parts, shaping, joining and styling details for apparel products. Quality standards emphasized. Application of fit, principles of design and aesthetic principles. Prerequisites: AMPD 1510, AMPD major. Extra fee.

**AMPD 2720** Career Exploration (3). Fall, Spring. Explore career opportunities in the fashion industry. By investigating a variety of fashion careers, students will establish realistic goals to develop their career paths. Prerequisite: AMPD 1510 and AMPD major.

**AMPD 2810** Textiles for Apparel (3). 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** FIT Visiting Student (12-18). 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** Apparel Studio II: Patternmaking (3). On demand. Technical and creative expression in applying patternmaking principles by the flat pattern and/or draping methods. Develop patterns from sketches or photographs. Revise patterns after constructing sample garments. Prerequisite: AMPD 2510. Four contact hours. Extra fee.

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

**AMPD 3510** Fashion Forecasting (3). 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 3600** Multi-Channel Apparel Retailing (3). Fall, Spring, Summer. Examine apparel businesses and their
use of technology; providing an understanding of strategic integration of brick-and-mortar, electronic, and direct methods. Prerequisites: AMPD 1510 and AMPD 2020.

**AMPD 3800 Visual Merchandising (3).** Fall, Spring. Understand visual merchandising concepts and strategies for creating apparel retail environments. Develop virtual stores to conceptualize store interiors, through merchandise planograms, using 3D store modeling software. Prerequisites: AMPD 1510, AMPD 2510, CO-OP 50, and MKT 3000.

**AMPD 3890 Supervised Field Experience in Apparel Merchandising & Product Development (3).** Fall, Summer. Supervised work experience in an approved site within the apparel or soft goods industry. Work settings and specific requirements must be approved. May be repeated. Graded S/U. Prerequisites: AMPD major, AMPD 1510, AMPD 2020, CO-OP 50.

**AMPD 4020 Merchandising Soft Goods (3).** 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. Extra Fee.

**AMPD 4030 Consumer Analysis in Fashion (3).** 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 Product Development Studio (3).** 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 2020, AMPD 3130, AMPD 3510 and MKT 3000, and Senior Standing. Extra Fee.

**AMPD 4400 Computers for Apparel Products (3).** 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 Global Issues in Apparel and Textiles (3).** 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. Extra Fee.

**AMPD 4800 Seminar in Apparel Merchandising and Product Development (1-4).** Fall, Spring, or Summer. In-depth examination of contemporary issues, concepts, and topics in apparel merchandising and product development. May be repeated up to 9 hours if topics differ. Prerequisite: Juniors or Seniors, or consent of instructor.

**AMPD 4890 Internship in Apparel Merchandising & Product Development (1-8).** 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 F I T Visiting Student (12-21).** 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.

**ARCH Architecture & Environmental Design**

**ARCH 1050 Design Representation I (3).** 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 1100 CADD for Architecture and Construction (3).** Fall, Spring, Summer on demand. Introduction through intermediate Computer Aided Design and Drafting concepts for architecture and construction, with an emphasis on foundational CAD techniques, orthographic projection, and annotation and documentation conventions. 2 hour lecture and 2 hour lab per week.

**ARCH 2050 Design Representation II (3).** 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 with a grade C or better. Extra Fee.

ARCH 2220 Design Studio I (3). 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 2330 History of Architecture I (3). Fall. Ancient and medieval Western architecture and traditional non-Western architecture in cultural, aesthetic, and technical aspects. Prerequisite: none.

ARCH 2340 History of Architecture II (3). Spring. Western architecture from renaissance to present and recent developments in global architecture in cultural, aesthetic, and technical aspects. May be taken before ARCH 2330. Prerequisite: none.

ARCH 2360 Mechanical and Electrical Building Systems I (3). 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. Approved for Distance Education.

ARCH 2710 Computer-Aided Design for Architecture (3). Fall, Spring, Summer on demand. Intermediate course emphasizing the role of 3D computer applications, including parametric modeling and Building Information Modeling in architectural design, presentation, and professional practice. Prerequisites: ENGT 1100, ARCH 1100 or 2 years (2 units) high school CAD with grade B or better. Approved for distance education.

ARCH 3210 Design Studio 2 (6). 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 Design Studio 3 (6). 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 Theory in Architectural Design (3). Spring. Lecture and panel discussion sessions on topics in architectural design theory. Prerequisite: ARCH 2330, ARCH 2340, or permission of instructor.

ARCH 3360 Architectural Materials and Systems (3). Fall, Spring, Summer on demand. Materials technical properties and construction methods and systems, incorporating expressive and sustainable design objectives. Two hours lecture and two hours laboratory. Prerequisites: ARCH 2360 and junior standing. Extra Fee.

ARCH 3370 Mechanical and Electrical Building Systems II (3). Spring. A 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 Advanced Computer-Aided Design for Architecture (3). 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 Historic Preservation (3). 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 Design Studio 4 (6). Fall. The study of urbanism in the holistic context of environmental design in relationship to urban design, architecture, landscape architecture and city planning. The study of cities as a multidiscipline process integrating physical, social, economic, political and sustainable factors. Prerequisite: C or better in ARCH 3220. Extra Fee.

ARCH 4220 Design Studio 5 (6). 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 4730 Advanced Building Information Modeling for Architecture (3). Fall or Spring, on demand. Advanced computer modeling concepts related to conceptual and parametric design tools, design documentation processes, and applications of BIM for environmental analysis, building performance, and data extraction. Prerequisites: ARCH 2220, ARCH 2360, and ARCH 2710 or instructor's permission.

ARCH 4800 Topics in Architecture and Design (1-3). Course addressing topics, trends, and developments in architecture and environmental
design, including theory, technology, and professional practice in the education of design professionals in architecture and allied fields. May be repeated on approval of adviser. Approved for Distance Education.

ARCH 4900 Problems in Architecture/Environmental Design Studies (1-3). 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.

ART 1010 Introduction to Art (3). 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 Design Studio: Surface and Process (3). 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 Drawing Studio: Perception and Color (3). 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 Media Studio: Space and Time (3). 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 1920Q Art: Culture and Community (3). Fall, Spring, Summer. Examination of the history, principles and processes of art in the context of culture and community. Is there a direct correlation between the quality of your life and art in your environment? What is art and how does it function? Students will engage in studio, community service, and/or online experiences investigating individual expression and cultural signification. Non-majors only. (2) hours studio, (1) hour lecture. Credit not allowed for both ART 1920Q and ART 1010. Prerequisite: Freshman and Sophomore standing.

ART 4700 Independent Study (1-3). 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 Internship in Arts Management (1-3). 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.

ARTC Art, Digital

ARTC 2210 Digital Imaging (3). 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: One or more of the following with concurrent registration in the remainder: ART 1020, ART 1030, ART 1120 or consent of instructor. Extra fee. Approved for distance education.

ARTC 3000 Contemporary Practices in Digital Arts I (3). On demand. Examination of emerging technologies and their applicability to innovative digital arts practice. Course content will require basic understanding of digital technology. Content designed to include interdisciplinary students and issues in other areas overlapping digital arts. Beginning and intermediate level studio techniques informed by historical and contemporary theory. Five studio hours. Concurrent enrollment in another section of ARTC 3000 with different topic is permitted. Prerequisites: Grade of C or higher in ARTC 2210 or permission of the instructor. May be repeated to a total of six hours under different topics. Extra Fee.

ARTC 3100 Animation Principles & Techniques (3). On demand. Exploration of traditional and experimental animation techniques with an emphasis on the basic principles of animation. Course includes a focus on timing, staging, concept development and studio production. Five studio hours. Extra Fee. Prerequisite: Grade of C or higher in ARTC 2210 or consent of instructor.

ARTC 3110 3-D Modeling (3). Fall. 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: ART 1020, ART 1030,
ART 1120, and grade of C or higher in ARTC 2210 or consent of instructor. Extra fee.

ARTC 3120 3-D Digital Animation (3). Spring. Concepts and techniques of 3-D digital animation. Course includes keyframing and basic kinematic techniques as well as principles of traditional animation and concepts development. Five studio hours. Prerequisites: grade of C or higher in ARTC 3110 or consent of instructor. Extra fee.

ARTC 3310 Interactive Art (3). Fall, Spring. Basic concepts of digital interactive multimedia art. Emphasis on interactive web art and interface design. Creative idea development which integrates image, text, animation, and audio with programming. Five studio hours. Prerequisites: grade of C or higher in ARTC 2210, and concurrent or prior enrollment in CS 2010, or consent of instructor. Extra fee.

ARTC 3440 Digital Video Art (3). 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: Grade of C or higher in ARTC 2210 or consent of instructor. Extra Fee.

ARTC 4000 Contemporary Practices in Digital Arts II (1-3). On demand. Examination of emerging technologies and their applicability to innovative digital arts practice. Course content varies to address contemporary trends. Advanced level studio techniques informed by historical and contemporary theory and practice. Five studio hours. Concurrent enrollment in another section of ARTC 4000 with a different topic is permitted. Prerequisite: grade of C or higher in at least one ARTC 3000-level course or consent of instructor. May be repeated to nine hours if topics differ.

ARTC 4090 Professional Practices and Presentation in Digital Arts (3). Fall. Advanced exploration of artistic direction and career planning for a senior planning to graduate in the current academic year with a BFA in Digital Arts. Development of artistic portfolio, professional presentation packages, and post graduation plans. Five studio hours. Prerequisites: BFA Digital Arts major. Concurrent registration in ARTC 4180. Extra fee.

ARTC 4130 Digital Character Animation I (3). Fall. First part of a two-course sequence. 3D animation preproduction 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: grade of C or higher in ARTC 3120 or consent of instructor. Extra Fee.

ARTC 4140 Digital Character Animation II (3). Spring. Second part 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, composting, and editing for the final production. Five studio hours. Prerequisites: grade of C or higher in ARTC 4130 or consent of instructor. May be repeated to six hours. Extra fee.

ARTC 4180 Senior Studio in Digital Arts (3). Fall. For BFA Digital Arts majors graduating in the current academic year. Supervised individual research as it applies to the final exhibition of digital artworks for the BFA degree. Five studio hours. Prerequisite: BFA Digital Arts major. Concurrent registration in ARTC 4090. Extra Fee.

ARTC 4230 Advanced Digital Imaging Art Studio (3). On demand. Advanced artistic development using advanced imaging techniques such as digital paint, image manipulation, large format printing. Investigation of artistic image output and representation through print, installation, or time based work. May be repeated to six hours. Five studio hours. Prerequisites: grade of C or higher in ARTC 2210 or consent of instructor. Extra fee.

ARTC 4240 Alternative Digital Print (3). On demand. 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: grade of C or higher in ARTC 2210 or consent of instructor. May be repeated to six hours. Extra Fee.

ARTC 4250 Photography for Digital Artists (3). On demand. Investigation of artistic expression using digital photographic tools, peripherals, and output. This will include study of fine art printing methods, professional level digital cameras, and where the medium is situated on the digital imaging, photographic and art continuum. Examination of the historical discipline of photography with the intention of redefining aesthetics within the digital arts and digital imaging framework. May be repeated to six hours. Five studio hours. Prerequisite: grade of C or higher in ARTC 2210 or consent of instructor. Extra Fee.

ARTC 4330 Advanced Interactive Art Studio (3). On demand. 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 include web art, mobile media production, installation art or electronics and art. May be repeated to six hours. Five studio hours. Prerequisite: grade of C or higher in ARTC 3310 or consent of instructor. Extra fee.

ARTC 4410 Collaborative Multimedia Development (3). On demand. Focus on teamwork and collaboration as well as crossdisciplinary creative application of interactive art, imaging, video, and
digital animation techniques. May involve fine art research or client projects. Five studio hours. Prerequisites: grade of C or higher in ARTC 2210 or consent of instructor. May be repeated to nine hours.

ARTC 4420 Art and Virtual Environments (3). 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: grade of C or higher in ARTC 2210 or consent of instructor. May be repeated to six hours. Extra fee.

ARTC 4430 Artistic Animation Effects (3). On demand. Creative development of animation and special effects using particle systems and dynamic simulation. Focus on artistic, technical and conceptual aspects of advanced animation techniques and compositing. Five studio hours. Prerequisite: Grade of C or higher in ARTC 3120 or consent of instructor. May be repeated to six hours. Extra fee.

ARTC 4440 Advanced Digital Video Art (3). On demand. Creative production of time-based art using digital video and effects. Emphasis on advanced video concepts, techniques, and compositing. Production of both single and multi-channel videos and video art installation. Five studio hours. Prerequisite: Grade of C or higher in ARTC 3440 or consent of instructor. May be repeated to six hours. Extra fee.

ARTC 4700 Independent Study in Digital Arts (1-3). 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 Digital Art Practicum (1-3). 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 Workshop in Digital Arts (1-3). 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.

ARTD Art Design

ARTD 2010 Principles of Graphic Design (3). 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; or permission of instructor. Extra fee.

ARTD 2020 Principles of Typography (3). 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 or permission of instructor. Extra fee.

ARTD 3010 Intermediate Graphic Design (3). Fall only. Continued study of the history and principles of type and image. Introduction to multi-page design, sequencing, pacing, and storytelling. Further exploration of typographic tools, techniques and terminology. Continued study of visual communication theory and critical thinking. Continued 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; or permission of instructor. Extra fee.

ARTD 3030 History of Graphic Design (3). 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 Three Dimensional Graphic Design (3). Spring only. Advanced exploration in graphic design principles and techniques specific to spatially-based visual communication and design problem solving, at both small and large scales. Emphasis on the implementation of traditional print processes, established and experimental new media technologies and display mechanisms, inventive form factors, and sustainable material specification and conservation methodologies. Projects may include development of packaging and environmental graphics/wayfinding systems. Five studio hours. Prerequisites: Grade of C or higher in ARTD 3010 and 3050 or permission of instructor. Extra fee.

ARTD 3050 Graphic Design Processes & Procedures (3). Fall only. Comprehensive 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 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 studio hours. Prerequisites: Grade of C or higher in ARTD 3010 or permission of instructor. Extra Fee.
ARTD 3060  Graphic Design Theory (3). 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: C or better in ARTD 3010. Majors only. Extra fee.

ARTD 4030  Systems-Based Graphic Design (3). Fall only. Introduction to, and exploration and application of, complex systems-based designs, to include, but not limited to, conceptual and strategic thinking within the context of brand/identity, information/visualization and UI/UX design. Output to include solutions for present day, complex design/information communication problems utilizing research, appropriate format, structure/organization and language. Continued development of oral, visual, and cognitive communication/presentation skills. Five studio hours. Prerequisites: Grade of C or higher in ARTD 3040 and ARTD 3060 or permission of instructor. Extra Fee.

ARTD 4050  Interactive Graphic Design (3). 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: Grade of C or higher in ARTD 3050 and ARTD 3060 or permission of instructor. Extra fee.

ARTD 4060  Graphic Design Practicum (3). 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 or permission of instructor. Extra fee.

ARTD 4070  Graphic Design Senior Thesis (1). Fall, Spring, Summer. Credit for Senior Thesis: proposal, research, writing, mid-review, design development, final presentation. Continued development of oral, visual, and cognitive communication/presentation skills. Repeatable up to four hours. Only three hours applied to graduation requirement. Prerequisites: ARTD 3010 and ARTD 3050. Graded S/NC.

ARTD 4080  Senior Studio in Graphic Design (3). 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  Independent Studies in Design (1-3). 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  Graphic Design Internship (3-6). 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  Special Topics in Design (3). On demand. Innovative and intensive group studies in selected design research. Prerequisites announced for each offering. May be repeated.

ARTE Art Education

ARTE 2440  Art for Early Childhood Education (2). 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  Art for Middle Childhood Education (2). 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  Foundations of Art Education (3). Fall, Spring. Introduction to historical/contemporary approaches to art education, study of child art development, and lesson planning. Includes field experience in schools. Prerequisites: a grade of C or better in GSW 1110. Extra fee.

ARTE 3520  Media and Methods in Art Education (3). Fall. Studio practices, art criticism, and art history methods; curriculum development and lesson planning; preschool field-based practicum. Prerequisites: ARTE 2520. May be taken concurrently with ARTE 3820. Extra fee.

ARTE 4070 Visual Arts Methods and Teaching Practicum (3). Fall, Spring. Implementation of planned curricula, teaching methods, and assessment strategies in School of Art’s Saturday Art Program (ages 3-17). May be taken concurrently with ARTE 4520. Extra fee.


ARTE 4700 Independent Studies in Art Education (1-3). 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 Teaching Internship (7). 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. Graded S/U. Extra fee.

ARTE 4950 Special Topics in Art Education (1-3). Workshop topics and intensive group studies relative to special needs of visual arts teachers. May be repeated.

ARTE 4970 Teaching Internship (7). 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. Graded S/U. Extra fee.

ARTE Art History

ARTH 1450 Western Art I (3). Fall, Spring. Ancient and Medieval art.

Applicable to the BG Perspective (general education) humanities and arts requirement.

ARTH 1460 Western Art II (3). 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 1920Q Inquiry in Humanities and Creative Arts (3). Fall, Spring. Survey of Art in the Western World, from Ancient to Medieval times. Applicable to the BG Perspective (general education) humanities and arts requirement. Credit not allowed for both ARTH 1920Q and ARTH 1450. Prerequisite: Open only to Freshman students.

ARTH 2700 Survey of World Art (3). Alternate Fall. Survey of world arts and cultures, from Africa, Asia, Oceania, the Caribbean, and the Americas, including arts of various media and materials, and those created within selected religious practices and belief systems. Required for BA Art History majors.

ARTH 2900 Art History Methods and Theory (3). Fall. Introduction to the critical traditions of art history and its current developments, with a focus on the major methodological approaches to visual analysis. Required for BA Art History majors and minors. Extra Fee.

ARTH 3110 Bronze Age Aegean Art (3). Art and archaeology of Bronze Age Aegean cultures, from the Paleolithic Era to the end of the Bronze Age; the Minoan and Mycenaean civilizations. Prerequisite: one of ARTH 1450, ARTH 1460, or ARTH 2700, or consent of instructor.

ARTH 3130 Greek Art (3). Art of Greece from the Dark Ages through the Hellenistic period: emphasis on vase-painting, sculpture and architecture. Prerequisite: one of ARTH 1450, ARTH 1460, or ARTH 2700, or consent of instructor.

ARTH 3150 Etruscan and Roman Art (3). Etruscan and Roman sculpture, painting, architecture and other arts from the 9th century BCE to the 5th century CE. Prerequisite: one of ARTH 1450, ARTH 1460, or ARTH 2700, or consent of instructor.

ARTH 3170 Ancient Near Eastern Art (3). From the Tower of Babel and the Hanging Gardens, to the Code of Hammurabi, the art of the Ancient Near East holds a mythical aura. This lecture course will investigate and demystify the arts of the Ancient Near East (Mesopotamia, Iran, Levant, and Anatolia) through a survey from the invention of cities (ca. 4000 BC) to the advent of Islam (ca. 600 AD). We will examine temple and palace architecture, monumental sculpture, glyptic, terracotta and small-scale luxury arts, with the goal of appreciating ancient civilization. Prerequisite: one of ARTH 1450, ARTH 1460, or ARTH 2700, or consent of instructor. Extra Fee.

ARTH 3190 Ancient Egyptian Art (3). This lecture course will explore the arts of Ancient Egypt, the Land of the Pharaohs, from the first pyramids (ca. 3500 BC) through the death of Cleopatra and the Roman conquest (30 BC). We will focus on major royal monuments, temples, funerary art and mummies, statuary, and luxury arts. Emphasis will be placed on understanding Egyptian art within its cultural context, in order to better understand both the ancient civilization and the modern fascination with Egypt. Prerequisite: one of ARTH 1450, ARTH 1460, or ARTH 2700, or consent of instructor. Extra Fee.

ARTH 3310 Early Christian and Byzantine Art (3). Fall. The art of the Byzantine Empire, spanning eleven centuries and several continents, offers a dazzling array of materials and forms to the contemporary student. This course follows the rise and fall of Byzantium and is organized chronologically by the key moments in its political and religious history, beginning with Constantine’s foundation of Constantinople and the official adoption of Christianity as the Imperial religion (4th century CE), and ending with the Ottoman takeover of Constantinople in 1453. Prerequisite:
one of ARTH 1450, ARTH 1460, or ARTH 2700, or consent of instructor.

ARTH 3330 Medieval Art (3). Spring. This course focuses on the artistic culture of the Middle Ages, a vast span of time from the collapse of the Roman Empire (5th century) through the rise of renaissance culture (14th century). The course investigates the function of art and architecture in relation to specific cultural and cross-cultural contexts across Europe and the Holy Lands. Particular attention will be paid to critical issues in medieval scholarship, including investigations of the relation between image and text, art and the body, patronage and self-fashioning, space and architectural function. Prerequisite: one of ARTH 1450, ARTH 1460, or ARTH 2700, or consent of instructor.

ARTH 3350 Art of the Italian Renaissance (3). Selective survey of the major monuments, personalities, and cultural events in Italy from the late 13th through the early 16th centuries. With the aim of recreating the social context for the art and architecture of the period, the course examines the sacred and secular spaces of urban, courtly, religious, and domestic contexts. Critical issues of particular interest include the myth of the Renaissance artistic genius, the socio-political motivations behind the revival of antiquity, the shift in the status of the artist, and the new emphasis on artistic imagination. Prerequisite: one of ARTH 1450, ARTH 1460, or ARTH 2700, or consent of instructor.

ARTH 3370 Northern Renaissance Art (3). Spring. This course examines the art and architecture produced in select European countries located north of the Alps from the late fourteenth century through the sixteenth century. Particular attention is given to the social context of artistic production and reception, and to certain issues that are critical to the study of Northern European art, including the connection between art and devotional life, court culture, the effect of Humanism and the Reformation on artistic production, regional differences in patronage of the arts, and the shifting status of the artist. Prerequisite: one of ARTH 1450, ARTH 1460, or ARTH 2700, or consent of instructor.

ARTH 3390 Baroque Art (3). Spring. Baroque art explodes onto the artistic scene in new dramatic, descriptive, sensual and emotive forms from the late sixteenth through the early eighteenth centuries. This class will provide an in-depth examination of the visual arts produced during this time in Europe, and will closely study the dominant artistic personalities of the period. Three overarching frames will guide our investigation of the Baroque: the Counter-Reformation (alternatively called the Catholic Restoration), the development and suppression of New Science, and the flourishing of the theatrical arts. Prerequisite: ARTH 1450, 1460, or 2700, or consent of instructor.

ARTH 3510 Art of the 19th Century (3). Painting and sculpture in the 19th century in Europe from neoclassicism through post-impressionism. Prerequisite: one of ARTH 1450, ARTH 1460, or ARTH 2700, or consent of instructor.


ARTH 3650 Histories of Photography: Theory and Criticism from Invention to Present (3). Critical survey of primarily European and American photography from roughly 1839 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 "modern" and "post-modern" medium. Prerequisite: one of ARTH 1450, ARTH 1460, or ARTH 2700, or consent of instructor. Extra fee.

ARTH 3670 Art of the Modern Period (3). Major movements in painting, sculpture, and other media in Europe and America from Fauvism to 1960; theoretical bases as well as formal innovations. Prerequisite: one of ARTH 1450, ARTH 1460, or ARTH 2700, or consent of instructor. Extra fee.

ARTH 3690 Art of the Contemporary Period (3). Major movements in painting, sculpture, and other media in Europe and America from the later 20th century to the present; traditional art forms as well as the more radical recent developments. Prerequisite: one of ARTH 1450, ARTH 1460, or ARTH 2700, or consent of instructor.

ARTH 3710 Art of India and S.E. Asia (3). Art and architecture in India and S.E. Asia from the earliest times to present. Prerequisite: one of ARTH 1450, ARTH 1460, or ARTH 2700, or consent of instructor. Applicable to the BG Perspective (general education) humanities and arts and international perspective requirements. Extra fee.

ARTH 3730 Art of China and Japan (3). Art and architecture of China and Japan from earliest cultures to present. Prerequisite: one of ARTH 1450, ARTH 1460, or ARTH 2700, or consent of instructor. Applicable to the BG Perspective (general education) humanities and arts and international perspective requirements. Extra Fee.

ARTH 3750 Art of Western Africa (3). 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 students a better understanding and appreciation of this complex art. Prerequisite: one of ARTH 1450, ARTH 1460, or ARTH 2700, or consent of instructor. Applicable to the BG Perspective (general education) humanities and arts and international perspective requirements. Extra fee.

ARTH 3770 MesoAmerican Art (3). Survey of the art and cultures of the peoples of MesoAmerica, with a primary focus on ancient 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: one of ARTH 1450, ARTH 1460, or ARTH 2700, or consent of instructor. Applicable to the BG Perspective (general education) humanities and arts and international perspective requirements.

**ARTH 3790  Oceanic Art (3).** 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: one of ARTH 1450, ARTH 1460, or ARTH 2700, or consent of instructor. Applicable to the BG Perspective (general education) humanities and arts and international perspective requirements.

**ARTH 4150  Critical Issues in Ancient Art (3).** This seminar will focus on a specified thematic consideration of arts and cultures in Ancient Greece, Rome, Egypt, or the Near East. Particular topics may include arts of various media and materials, and/or those created within selected social and cultural traditions. Thematic considerations may include issues of power, gender, or cross-cultural interaction, or a particular media, such as ceramics or precious metals. Repeatable once when topics vary. Prerequisite: one ARTH 3100-level course or consent of instructor. Extra Fee.

**ARTH 4350  Critical Issues in Early Modern Art (3).** Fall. Seminar on critical issues, problems, and debates in the early modern art world (late Medieval through Baroque periods). Each semester will focus upon varied thematic, historical, or theoretical issues such as: the early modern patron of art; violence and art in early modern culture; art, ritual, and performance in Italy; and/or major works, artists, theorists, artistic centers, or movements. Repeatable once if topics differ. Prerequisite: one ARTH 33###-level course, or consent of instructor. Extra Fee.

**ARTH 4650  Critical Issues in Art and Technologies (3).** Fall. Seminar on critical issues, problems, and debates in the arts and technologies as related to photography, film, video, and/or digital new media in primarily Western geographical contexts. Each semester will focus upon varied thematic, historical, or theoretical topics such as issues of production and reproduction, race and gender, particular media or performance, the introduction of new processes, major technological changes, and/or major works, artists, theorists, critics, or movements. Prerequisite: any ARTH 3###-level course, or consent of instructor. Repeatable once when topics vary.

**ARTH 4690  Critical Issues in Modern and Contemporary Art (3).** Spring. Seminar on critical issues, problems, and debates in modern and contemporary art, theory, or criticism in all media within primarily Western geographical contexts. Each semester will focus upon varied thematic, historical, or theoretical issues such as: modernism, postmodernism, and aftermodernism; art history and historiography; psychoanalytical, postcolonial, feminist, and queer theory; performance and installation art; and/or major works, artists, theorists, critics, or movements. Prerequisite: one ARTH 36XX-level course, or consent of instructor. Repeatable once when topics vary.

**ARTH 4700  Independent Studies in Art History (1-3).** 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 4750  Critical Issues in World Art (3).** Fall. This seminar will focus on a specified thematic consideration of arts and cultures in Africa, Asia, Oceania, Caribbean, and/or the Americas. Particular topic may include arts of various media and materials and/or those created within selected religious practices and belief systems. Thematic considerations may include issues of power, gender, or contemporary arts, or a particular media such as textiles or performance. Repeatable once when topics vary. Prerequisite: one ARTH 37###-level course, or consent of instructor. Extra Fee.

**ARTH 4800  Travel Colloquium (3).** On demand. Art historical practice in conjunction with travel to selected domestic or international destinations. Variety of research methodologies to enhance experience and understanding of the arts in relation to culture and history. Extra Fee.

**ARTH 4900  Professional Practices in Art History (3).** Spring. Hands-on experience of the methods and practices of the discipline of art history, with focus on professional development and practical experience in the field. Required for BA Art History majors and minors. Repeatable once. Extra Fee.

**ARTH 4950  Special Topics in Art History (3).** 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.

### ARTS Art Studio

**ARTS 2110  Drawing: The Figure (3).** Fall, Spring. Introduction to the theory, practice, and history of drawing the human figure from life. Examine 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  Introduction to Painting (3).** Fall, Spring. Introduction to the theory, practice and history of oil painting. Exploration of painting techniques from traditional to contemporary with an emphasis on perceptual problem solving. Five studio hours. Prerequisite: ART 1030. Extra fee.

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

**ARTS 2410 Introduction to the Language of Photography (3).** Fall, Spring. Introduction to the theory, practice and history of the language of photography from its earliest invention to the modern age before digital. Through the study and use of the camera obscura, the pin-hole and the single lens reflex students will explore the principles of optics, film and darkroom craft in this introductory analog studio course. Five studio hours. Prerequisite: ART 1120. Extra Fee.

**ARTS 2610 Glass I (3).** Fall, Spring. Freehand-blown glass formation. Beginning techniques of hot glass manipulation and cold working processes. Introduction to the practice and history of studio glass art. Five studio hours. Prerequisite: ART 1120. Extra fee.

**ARTS 2710 Ceramics I (3).** 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 Jewelry and Metals I (3).** Fall, Spring. Foundation techniques and creative processes including design, fabrication, casting, and surface treatments of jewelry and small metal objects. Five studio hours. Extra fee.

**ARTS 2910 Modeling and Moldmaking (3).** 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 3010 Special Topics 2-D (1-3).** On demand. Innovative and intensive group study in selected studio research. Topic will vary with each offering. May be repeated. Prerequisite: BFA standing.

**ARTS 3030 Special Topics 3-D (1-3).** On demand. Innovative and intensive group study in selected studio research. Topic will vary with each offering. May be repeated. Prerequisite: BFA standing.

**ARTS 3130 Contemporary Concepts in Drawing (3).** Fall, Spring. Exploration of a variety of genres, themes, and techniques in drawing. Drawing as both an independent medium of expression and as a visual language applicable to a wide range of cultural practices. Prerequisite: ARTS 2110 or permission of the instructor. Repeatable to six hours. Extra fee.

**ARTS 3240 Contemporary Concepts in Painting (3).** Fall, Spring. Exploration of a variety of genres, themes, and techniques in painting. Five studio hours. Prerequisite: ARTS 2210 or permission of the instructor. Repeatable to six hours. Extra fee.

**ARTS 3320 Printmaking: Relief and Monoprinting (3).** 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 Printmaking: Etching (3).** 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 Printmaking: Lithography (3).** 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 3350 Screenprinting (3).** On demand. Exploration of the theory, practice, and history of screenprinting to include additive, reductive, hand stencil, and photo processes with monoprinting and editioning techniques. Five studio hours. Extra Fee. Prerequisite: ARTS 2310.

**ARTS 3410 Community Projects in Photography (3).** Fall or Spring. This studio course will engage students with a community partner and/or a critical social/community issue that will enrich the community and the experience of photography students. Students will develop their communication skills and continue to improve on a technical level in the photographic medium. Students will learn to negotiate and blend their personal vision with that of the expectations of a "client" or community partner. Offered only one semester per year. Prerequisite: ARTS 2410. Repeatable to 6 hours.

**ARTS 3420 Photography: Large Format (3).** 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 Contemporary Concepts in Photography: Introduction to Color (3).** Fall, Spring. Introduction to the digital darkroom through theory, practice and history of color photography. This course explores the use of color as an expressive medium emphasizing color balancing skills and theory. Technical focus is on basic capture, editing and output options, management of files and essentials of workflow. Lectures and slide presentations will complement assignments and a self directed project, preparing students to take on greater independent research. Repeatable to six hours. Prerequisite: ARTS 2410. Extra fee.
ARTS 3620  Glass II (3). 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 3720  Ceramics II (3). 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  Ceramics III (3). 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  Enameling on Metal (3). Fall, Spring. Creative applications of basic enameling techniques are explored for various applications on jewelry and related objects. Five studio hours. Extra Fee.


ARTS 3920  Introduction to Carving (3). 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  Metal Casting (3). 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 3990  Professional Practices and Presentation (1). 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 4200  Special Topics 2-D (3). 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 4210  Special Topics 3-D (3). On demand. Innovative and intensive group study in selected studio research. Topic will vary with each offering. May be repeated. Extra fee.

ARTS 4240  Advanced Painting and Drawing (3). 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: ARTS 3240 and ARTS 3130 or by permission of the instructor. Repeatable to six hours. Extra fee.

ARTS 4280  Senior Studio in Painting and Drawing (3). Fall, Spring. For BFA 2-D majors with a specialization in painting and drawing only. Supervised individual research in painting and/or drawing in preparation for the BFA Thesis Exhibition. Five studio hours. Prerequisite: ARTS 4240. Repeatable to six hours. Extra fee.

ARTS 4350  Advanced Printmaking (3). 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  2D - Digital Hybrids (3). 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. Extra fee.

ARTS 4380  Senior Studio in Prints (3). 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  Advanced Contemporary Concepts in Photography (3). Fall, Spring. This advanced course in photography will continue the discussion of contemporary issues and practice through slide lectures, assignments and self directed projects. Emphasis will be placed on individual technical and conceptual research and the development of personal imagery. Five studio hours. Prerequisites: ARTS 3420 and ARTS 3430. Repeatable to six hours. Extra fee.
ARTS 4480 Senior Studio in Photography (3). 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 4740 Advanced Ceramics (3). Fall, Spring. Intended for students planning a career in the ceramics field. Sophisticated techniques of clay, glaze and fusing 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 Glazes and Raw Materials (3). 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 Kiln Design (3). 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 4840 Jewelry and Metals III (3). Fall, Spring. Advanced problems in forming and fabrication. Five studio hours. Prerequisite: ARTS 3830. Repeatable to six hours. Extra fee.

ARTS 4850 Jewelry and Metals IV (3). 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 Senior Studio in Jewelry and Metals (3). 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/metal works for the BFA Art degree. Five studio hours. Prerequisite: ARTS 4850. Repeatable to six hours. Extra fee.

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

ARTS 4940 Advanced Technical Carving (3). 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 Advanced Sculptural Research (3). 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 Senior Studio in Sculpture (3). 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.

AS Arts & Sciences

AS 1000 Seminar in Arts and Sciences (1-4). 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 Seminar in Arts and Sciences (1-4). 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 AIMS (Academic Investment in Math and Science) Seminar I (1). 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 AIMS (Academic Investment in Math and Science) Seminar II (1). 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 1050 STEM Topics (1). Summer.** This course emphasizes skill development in pre-calculus/calculus, chemistry and other science-based concepts including computer science. It introduces the use of project-based work in the STEM fields for students in the AIMS-BOSEF and AIMS-OH/LSAMP programs. Extra Fee.

**AS 1100 Arts BG (3).** 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 1150 Investigations in Science and Mathematics (3).** Summer. Hands-on, inquiry-based activities involving fundamental ideas in mathematics and science. Ideas revolve around problem solving. Open only to ACTION students. Extra Fee.

**AS 1160 Research in Math and Science (1).** Spring. An initial foray in the world of doing mathematics and doing science. Forming appropriate questions, setting up a research design, carrying out the proposed plan, analyzing results. Open only to ACTION students. Extra fee.

**AS 1920Q ArtsBG: Experiencing the Arts in Contexts (3).** Fall, Spring. Students attend a variety of BGSU arts events (plays, exhibitions, concerts, etc.) and engage in challenging assumptions about how the arts serve self-expression, humanistic inquiry, and the public good. Encourages thinking "across the arts" and creating critical interpretations of art in an interdisciplinary and collaborative way. Includes active discussion and group activities, show journal writing, and creative projects. Credit not allowed for both AS 1920Q and AS 1100. Prerequisite: Freshman or Sophomore standing.

**AS 2000 Seminar in Arts and Sciences (1-5).** 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. Extra Fee.

**AS 2160 Math/Science Practicum in Industry (1).** Spring. A practicum to see how math and/or science is used in industry, government agencies, community agencies or other non-academic environments. Shadow employees and engage in project for the company. Prerequisite: AS 1160. Open only to ACTION students.

**AS 2500 Great Ideas (3).** 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 Seminar in Arts and Sciences (1-5).** 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. Extra Fee.

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

**AS 4000 Seminar in Arts and Sciences (1-4).** 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 Arts Professional Credit Program (1-15).** 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 Independent Study (1-4).** 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 Internship (1-12).** 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.
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 4700 Special Topics in Asian Studies (3). On demand. In-depth
exploration of issues related to Asian literature, culture, politics, history,
religion, business and area studies to meet curriculum needs and student
requests both on campus and in a study abroad setting. May be repeated
up to 12 hours if topics differ.

ASIA 4800 Senior Project in Asian Studies (3). 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 Internship (3-12). 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.

ASTR Astronomy

ASTR 1940Q Inquiry into Astronomy (3). Fall, Spring, Summer.
Scientific inquiry into the solar system, including motions in the sky,
the planets and other objects in the solar system, and the formation
and development of the solar system. Prerequisite: Open only to Freshman
students except by permission of instructor.

ASTR 2010 Modern Astronomy (3). 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)

ASTR 2120 The Solar System (3). 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 Independent Study (1-3). 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 Life in the Universe (3). 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 Understanding the Cosmos (3). 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 Observational Astronomy (2).** 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 Recent Progress in Astronomy (2).** 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 Stellar Structure and Evolution (3).** 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 PHYS 4030.

**ASTR 4700 Independent Study in Astronomy (1-3).** 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.

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**AT Athletic Training**

**AT 2020 Introduction to Athletic Training (3).** Fall, Spring. An introduction to athletic training 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.

**AT 2030 Emergency Care in Athletic Training (2).** Students will learn how to handle emergency situations in the arena of athletic training. This will include skills in spine boarding, oxygen administration and more advanced emergency skills. Students will also learn how to perform the skills of CPR, rescue breathing and how to use an automatic defibrillator. One one-hour lecture and one two-hour laboratory. Extra Fee.

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

**AT 2120 Clinical Education in Athletic Training 1 (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 introductory clinical proficiencies associated with pre-admission coursework for the Athletic Training (AT) program.

**AT 3120 Therapeutic Modalities (3).** Examination of the application and physiological responses to selected therapeutic modalities.

**AT 3140 Clinical Education in Athletic Training 2 (1).** Clinical education at athletic training clinical site assignments with supervision by an Approved Clinical Instructor (ACI) or other certified athletic trainer (ATC). Development and demonstration of level appropriate entry-level clinical proficiencies coursework for the Athletic Training (AT) program.

**AT 3170 Pathology & Evaluation of Orthopedic Injuries: Upper Extremity (3).** 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: AT 2100.

**AT 3180 Clinical Education in Athletic Training 3 (2).** Athletic training clinical education at clinical sites with direct supervision by an Approved Clinical Instructor (ACI) or other Clinical Instructor (CI). Development and demonstration of level appropriate entry-level clinical proficiencies associated with coursework for the Athletic Training (AT) program. Prerequisite: AT 2120.


**AT 4120 Clinical Education in Athletic Training 4 (2).** Athletic training clinical education at affiliated sites with direct supervision by an Approved Clinical Instructor (ACI) or other Clinical Instructor (CI). Development and demonstration of level appropriate entry-level clinical proficiencies associated with coursework for the Athletic Training (AT) program. Prerequisite: AT 3140.

**AT 4150 Therapeutic Medications & Health Conditions (3).** Medical conditions that athletes and other physically active people may experience in their performance; therapeutic medications, and other evaluation and treatment strategies appropriate. Prerequisite: AT 3170.

**AT 4160 Therapeutic Exercise (3).** 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: AT 3170.
AT 4200 Leadership and Management in Allied Health Care (3). Leadership competencies pertinent to allied health care professionals and management techniques for athletic trainers. Special attention is given to leadership and management issues outlined in the Board of Certification role delineation study and National Athletic Trainers Association educational competencies. Prerequisite: AT 2020.

AT 4880 Clinical Education in Athletic Training (2). Athletic training clinical education at affiliated sites with direct supervision by an Approved Clinical Instructor (ACI) or other Clinical Instructor (CI). Development and demonstration of level appropriate entry-level clinical proficiencies associated with coursework for the Athletic Training (AT) program. Prerequisite: AT 4120.

BA Business Administration

BA 1010 Special Topics in Business Administration (1-3). 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 Introduction to Business (3). 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 Overview of Business Administration (3). 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 1501 College of Business Transition Seminar (1). This course is a transitional course for transfer students who already possess basic business acumen. The course introduces students to the expectations of the College of Business and the requirements of the BSBA. Prerequisite: Students who have completed at least 5 BSBA Core requirements are eligible to take BA 1501, no credit for both BA 1500 and BA 1501.

BA 2010 Special Topics in Business Administration (1-3). 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 Business Communication (3). 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 3000 Executive Seminar (2). 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 Special Topics in Business Administration (1-3). 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 3050 Ethics and Entrepreneurship (3). 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 Introduction to Hospitality Management (3). 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 Organization and Structure of Health Care Services Industry (3). 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 Business in the Global Arena (3). 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 2030. Approved for distance education.

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

BA 3960 Workshop on Current Topics in Business Administration (1-3). On demand. Selected topics in business administration. May be repeated if topics differ. No credit allowed toward BSBA degree.
BA 4010  Special Topics in Business Administration (1-3). 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 4050  Business Policy and Strategy (3). 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, MKT 3010 or MKT 3000 and OR 3800 and admission to the BSBA program. (May not be taken concurrently with any of the prerequisites.)

BA 4060  Global Strategy (3). Fall, Spring, Summer. Integrates functional areas of business with a global perspective. Strategic management planning process: decision making under uncertainty; global business and industry environment; resources and capabilities of the firm and its competitors; global industries and competition; global and multimarket investment strategies; globalization and economic development; political, cultural, legal, financial, and ethical diversity; social responsibility; corporate culture; and values and ethics. Prerequisites: FIN 3000, MGMT 3000, MGMT 3600, MKT 3010, admission to BSBA. No credit for BA 4050.

BA 4200  Health Care Case Problems (3). 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  Health Care Internship (3). 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  Regional Issues in International Business (3). 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  Global Management (3). 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. Approved for distance education. Check with Department of Management for required technologies.

BA 4800  Hospitality Management Seminar (3). 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  Business Internship (1-3). 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  Studies in Business Administration (1-3). 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  Studies in International Business Administration (1-3). 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  Reading for Honors in Business Administration (1-3). Fall, Spring, Summer. Supervised, independent program of reading and study. Prerequisites: 3.0 accumulative GPA and consent of department.

BAT Business Administration Technology

BAT 1000  Introduction to Real Estate (2). 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  Real Estate Law (2). 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 salespersons, 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  Introduction to Business Technology (3).** Business technical process including structure of business, functions of marketing, production, finance, personnel, technical processes of control, and responsibilities of business.

**BAT 2010  Human Resource Management (3).** 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 2030  Production Management (3).** 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  Marketing (3).** Introduction of organization, management and practice of marketing by business firms.

**BAT 2050  Total Quality Leadership (3).** 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  Business Finance (3).** Funds allocation and acquisition process of the firm, financial planning, capital budgeting, capital structure, long- and short-term financing.

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

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

**BAT 2130  Real Estate Finance (3).** 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  Real Estate Appraisal (2).** 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  Real Estate Finance (2).** 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  Real Estate Brokerage (2).** 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  Special Topics in Real Estate (2).** 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  Retail Management (3).** 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  Studies in Business (1-3).** 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  Field Experience (1-3).** 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.

**BGSU Bowling Green State University**

**BGSU 1000  University Seminar (3).** Various thematic topics. 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.

**BGSU 1910  First Year Seminar (1).** Fall, Spring, Summer. First Year Seminar program offers first time, first year BGSU students an opportunity to explore an academic topic of interest to engage them in the academic life of the university. Offered in a variety of intriguing topics, the FYF seminars are limited to 20 students each, providing new students the opportunity to
engage with faculty and other first-year students in a small class setting.

BGSU 4800 Faculty-Led International Academic Experience (15). Academic coursework completed in conjunction with travel to selected international destinations. Experience may be tied to a specific on-campus course or offered as a stand-alone academic experience abroad. May be repeated.

Biology

BIOL Biology

BIOL 1010 Environment of Life (3). 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. 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.

BIOL 1040 Introduction to Biology (4). 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 1090 Life in Extreme Environments (3). Fall, Spring. An introduction to organisms that live in inhospitable or unexpected environments and the special adaptations that allow survival in those environments. Topics include life in the deep sea, at hydrothermal vents and hot springs, in the Antarctic, deep below ground, and organisms that tolerate radioactivity and toxic chemicals. Three one-hour lectures. High school biology recommended. Not accepted toward biology major or minor. Applicable to the BG Perspective (general education) natural sciences requirement.

BIOL 1940Q Inquiry in Science and Technology (3). Fall, Spring, Summer. Understanding of the biological natural world and how human technological advances have impacted it. This will focus on human and ecosystem health including basic ecology and current environmental problems, the cell, metabolism, genetics, reproduction, development, evolution, and terrestrial and aquatic environments. Students will gather and analyze data, gaining an understanding of the nature of science. 2 hours of lecture and 1 hour of laboratory. Prerequisite: Open only to Freshman students.

BIOL 2000 Biology Today (1). 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 Concepts in Biology I (5). 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 Concepts in Biology II (5). 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 Field Biology of the Vertebrates (3). 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 Biology of Aging (3). 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 Microbiology (4). 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 Microbiology for Health Professionals (3). Fall, Spring. 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 Microbiology Laboratory for Health Professionals (1). 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 Introduction to Behavioral Neuroscience (3). 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 Human Anatomy and Physiology I (4). 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 Human Anatomy and Physiology II (4). 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 General Botany (4). 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 General Genetics (4). 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 corequisite: BIOL 3500. Extra fee.

BIOL 33520 Laboratory in Genetics (1). Fall, Spring. Materials, methods and terminology of genetics through experiments, problems and demonstrations. One three-hour laboratory. Prerequisite or corequisite: BIOL 3500. Extra fee.


BIOL 33700 Introduction to Inland Marine Research (3). 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 33740 Marine Biology (3). 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 Special Topics in Biology (1-5). 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 Introduction to Biological Research (1-4). 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, but only four hours may be applied toward major in biology. Extra fee.

BIOL 4020 Honors Thesis (3). 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 General Parasitology (4). 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 Medical Entomology (3). 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 Cell Biology (4). 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 Molecular Biology (3). 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 Conservation Biology (3). Fall. Conceptual foundations and scientific principles of Conservation Biology. Biological diversity and factors responsible for the global extinction crisis. Focus on primary threats to biodiversity and the application of ecological and evolutionary principles to the management of threatened populations, species and ecosystems. Prerequisite: BIOL 2040.

BIOL 4100 Conservation Biology in Practice (3). 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 3350, BIOL 3540, and BIOL 4090 recommended.

BIOL 4110 Animal Physiology (4). 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 Plant Taxonomy and Evolution (4). 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 Landscape Ecology (3).** 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 Plant Molecular Biology (4).** 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 Neurophysiology (3).** 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 Animal Behavior (4).** 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 Molecular Biotechnology (3).** 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 Restoration Ecology (4).** Fall, alternative years. Fundamentals of restoring and reclaiming damaged or degraded landscapes and ecosystems. Topics include concepts and methods for reestablishing historic communities and the ecosystem functions necessary for their sustainability; types and approaches for assessment of ecosystems and site conditions; soil formation and development; roles of genetics, demography, and ecological processes and management techniques. Three one-hour lectures and one three-hour laboratory. Prerequisite: BIOL 2040. Recommended: BIOL 3540. Extra fee.

**BIOL 4240 Algology (4).** 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 Limnology (3).** 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 Pathogenic Microbiology (3).** 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 Invertebrate Biology (4).** 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 Neuroethology (3).** 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 4290 Evolutionary Ecology (3).** Fall Semester. This course focuses on major factors driving the evolution of ecologically important characteristics of organisms. Special emphasis is placed on examples related to evolutionary conservation ecology, such as evolution of invasive species, resistance to antibiotics and pesticides, and evolutionary responses to global climatic changes. Students will also gain practical knowledge on how to design experiments and analyze data in the fields of Ecology and Evolution. Three one-hour lectures. Prerequisite: BIOL 2040.

**BIOL 4310 Developmental Biology (3).** 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 Developmental Biology Laboratory (2).** Fall. Early embryogenesis analyzed using current molecular and cell biological techniques (e.g., DNA and/or RNA blots, embryo analysis including DNA and antibody staining). One three-hour laboratory and one one-hour lecture/laboratory. Prerequisite or corequisite: BIOL 4310 or consent of instructor. Extra fee.

**BIOL 4350 Entomology (4).** 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 4370 Light Microscopes and 3D Imaging (3).** Fall. Principles of light used as a basis for various
microscope designs. Phase, fluorescence, confocal, and total internal reflection optical paths are presented, along with photoemitters, image detection, three-dimensional organization of structures, image reconstruction and computation, and graphical display techniques. Students will learn how to approach biological processes and problems in multiple dimensions. Prerequisites: CHEM 1270 or 1370, CHEM 1280 or 1380, and PHYS 2010 or 2110 or permission of instructor. Extra Fee.

**BIOL 4380 Endocrinology (4).** Spring. 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/CHEM 3440. Biochemistry recommended. Extra fee.

**BIOL 4390 Immunobiology (3).** 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 Molecular Neurobiology (3).** 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 Chemical Ecology (3).** 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 Virus and Plasmid Biology (3).** 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 Microbial Physiology (3).** 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 Microbial Physiology Laboratory (2).** Spring. Growth, nutrition, biochemical, metabolic and regulatory activities of microorganisms. Prerequisite or corequisite: BIOL 4430 or consent of instructor. Two two-hour laboratories. Extra fee.

**BIOL 4445 Environmental Microbiology (3).** 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 Scanning Electron Microscopy (4).** 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 Microbial Genetics (3).** Spring. Molecular biology and genetic phenomena of bacteria and bacteriophage; mutagenesis and recombination. Three one-hour lectures. Prerequisites: BIOL 3130.

**BIOL 4490 Epidemiology (3).** 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 Teaching Evolution and the Nature of Science (3).** 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 online only. Prerequisites: BIOL 1040 or BIOL 2050 or equivalent or consent of instructor.

**BIOL 4510 Evolution (3).** 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 Aquarium Husbandry (1-3).** 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 Amphibian and Reptile Husbandry (1-3).** 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 major in biology. Three hours in lab per week for each credit hour earned. Prerequisite: consent of instructor.

**BIOL 4540 Biology Lab Tour (1).** 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 Principles of Biometry (3). 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 4660 Genomics (3). Fall. This course provides a contemporary analysis of the complete genomes of organisms. Cutting-edge bioinformatic tools and comprehensive databases will be utilized to study the genetics, biochemistry, and evolution of organisms at genome-wide scales. This course integrates hands-on research opportunities with lectures and is suitable for majors in Biology, Microbiology, and Biochemistry. Three one-hour lectures. Prerequisite: either BIOL 3130, BIOL 3500, or CHEM 3080.

BIOL 4700 Readings in Biological Sciences (1). 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 Sensory Ecology (3). 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 Ichthyology (3). 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.

BIOL 4730 Mammalogy (4). 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 Marine Biology Field Trip (1). On demand. Field trip to a marine environment or research station to study different marine habitats. Trips and tours of laboratory facilities, aquaria and research vessels. Course involves intensive fieldwork. May be repeated for different titled topics as approved by the departmental Marine Program Coordinator or Director, but only two hours may be applied toward biology major requirements. Prerequisite: BIOL 3740 (may be taken concurrently), or consent of instructor. Extra Fee.

BIOL 4760 Herpetology (3). 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 Ornithology (3). 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 Special Problems in Marine Science (1-6). 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 Topics in Marine Science (1-6). 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 Biology Internship (1-3). 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.

BIOL 4900 Seminar (1). Fall, Spring, Summer. Review of literature to acquaint student with research techniques and important work in various fields of biology. May be repeated, but only two hours may be applied toward a biology major. Prerequisite: 10 hours of biology.

BIZX Business Experience

BIZX 1100 Applied Business Experience I (1). Fall, Spring. First course in applied business experience series. Experiential learning with a focus on application and integration of introductory level business knowledge. Communication skills (oral and written) development through practice. Open BSBA or Pre-BSBA students only. Extra Fee. Prerequisite: BA 1500 or equivalent, or concurrent enrollment in BA 1501.

BIZX 2200 Applied Business Experience II (1). Fall, Spring. Second course in applied business experience series. Experiential learning with a focus on application and integration of sophomore level business knowledge. Communication skills (oral and written) development through
practice. Prerequisites: BIZX 1100; sophomore standing. Open to BSBA or Pre-BSBA students only. Extra Fee.

BIZX 3300 Applied Business Experience III (1). Fall, Spring. Third course in applied business experience series. Experiential learning with a focus on application and integration of junior level business knowledge. Communication skills development through practice. Extra Fee. Prerequisites: BIZX 2200, junior standing, admission to the BSBA.

BIZX 4000 Senior Applied Business Experience (3). Fall, Spring. Culminating experience required for BSBA majors. Emphasizes collaborative problem solving, knowledge application, and interfunctional integration. Prerequisites: senior standing; credit for FIN 3000, MGMT 3000, MGMT 3600, MKT 2100, OR 3800; and admission to the BSBA.

BUSE Business Education

BUSE 1010 Business Mathematics (3). 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 Keyboarding (1). Fall, Spring. Touch operation of alphanumeric and symbol keys on microcomputers. Students with one semester of high school typewriting or keyboarding will not receive credit toward graduation. Those students should enroll in BUSE 1190. Extra fee.

BUSE 1190 Advanced Keyboarding (2). 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 2610 Introduction to Word Processing Applications (1). Fall, Spring. Introduction to word processing terminology and fundamental applications such as creating, editing, saving, and printing business documents. Extra fee.

BUSE 2640 Introduction to Spreadsheet Applications (1). 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: BUSE 1100 or one semester of high school keyboarding or equivalent. No credit allowed toward BSBA degree. Extra fee.

BUSE 2650 Intermediate Spreadsheet Applications (1). 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 Advanced Spreadsheet Applications (1). 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 VisualBasic, and using web capabilities. Emphasis on using spreadsheets in decision-making process. Prerequisite: BUSE 2650 or its equivalent.

BUSE 2680 Introduction to Database Applications (1). 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: BUSE 1100 or one semester of high school keyboarding or equivalent. No credit allowed toward BSBA degree. Extra fee.

BUSE 2690 Intermediate Database Applications (1). 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 Advanced Database Applications (1). 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 Introduction to Presentation Software Applications (1). Fall, Spring. Presentation and photographic image-editing software applications.

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

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

BUSE 3140 Internship in Business Education (1-3). 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 Internship in Marketing Education (1-3). 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 3330 Business Records Management (1). 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 4280 Interrelatedness of Business and Technology in Business Education (3). Fall. Integration of business and computer technology-related concepts; advanced and emerging technologies taught by business technology educators.

BUSE 4510 Career Development (2). 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 4640 Teaching and Learning in Marketing Education (2). Fall. The teaching and learning process as it relates to marketing education. Prerequisites: BUSE 2000, BUSE 4000, EDFI 3030, MKT 3000. Minimum overall GPA of 2.4 required to enroll. Take concurrently with EDFI 4020 and BUSE 4770. C/F hours: 10. Transportation required.

BUSE 4650 Development and Trends in Workforce Education (2). 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: BUSE 2000, BUSE 4000. Take concurrently with BUSE 4640 and/or BUSE 4670, BUSE 4770.

BUSE 4970 Teaching Internship (1-16). Fall, Spring. Classroom teaching in business-marketing settings under supervision on full-day basis. Student follows calendar and hours of assigned school. Conferences and seminars supplement program. College/program eligibility requirements must be met. Transportation required. C/F hours: 40 hours per week. May be repeated. Graded S/U. Extra fee. Prerequisite: Grade of C or better in BUSE 4640 or BUSE 4670.

CAST Canadian Studies

CAST 2010 Introduction to Canadian Studies (3). 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.

CAST 3050 Canadian Film (3). 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 Seminar in Canadian Studies (1-4). 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 Communication Arts Technology

CAT 1910 Principles of Communication Arts Technology (3). 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 Computer Presentation Tools and Methods (1). Planning and implementing effective computer-based presentations for the business environment. Keyboarding skills and a basic knowledge of Windows environment required.

CAT 2200 Multimedia Literacy (1). 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 Voice and Video Systems (3). Technical overview of voice and video systems. Technical introduction to telephones, telephony and telecommunications systems, local and long distance technologies, computer telephony integration, video standards and delivery systems, applications in business and industry. Prerequisite: CAT 1910.

CAT 2900 Studies in Communication Arts Technology (1-3). 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 Communication Arts Technology Integrative Seminar (3). Capstone experience for associate degree in CAT. Directed field research; emphasis on occupational exploration and relations between field experience and coursework. Prerequisite: CAT major.

CCS Cultural and Critical Studies

CCS 3030 Intersections of Race, Gender, and Culture (3). Introduction to theories of culture, race, and gender and the relations among them. Open to ACS, ETHN, POPC, and WS majors and minors or by permission of instructor.
CCS 3710 Gender & Practice in Community-Based Work (3). 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.

CCS 4850 Qualitative Research Methods (3). Fall. Introduces students to modes of qualitative research commonly used in the fields of American culture studies, ethnic studies, popular culture, and women's studies. Focus on data gathering processes as well as data analysis. Open to ACS, ETHN, POPC, and WS majors and minors or by permission of instructor. Junior status required.

CCS 4860 Capstone Seminar (3). Spring, Capstone seminar for all American Culture Studies, Ethnic Studies, Popular Culture, and Women's Studies majors. Students conduct original research integrating knowledge from previous coursework in their major. Prerequisite: CCS 4850.

**CDIS Communication Disorders**

**CDIS 1230 Introduction to Communication Disorders (3).** 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 BG Perspective (general education) social sciences requirement.

**CDIS 2240 Phonetics (3).** Fall, Spring, Summer (online). 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 Speech and Language Acquisition and Development (3).** 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 Anatomy and Physiology of the Speech Mechanism (4).** Fall, Spring. Anatomical and physiological principles of the speech mechanism, including central and peripheral nervous systems. Four one-hour lectures. Prerequisites: CDIS major or permission of department chair.

**CDIS 3020 Acoustics for Speech and Hearing (3).** Fall. The nature of sound waves, simple harmonic motion, complex waves, sound transmission, and the acoustics of speech. Three one-hour lectures. Prerequisites: CDIS major or permission of department chair.

**CDIS 3110 Phonological Assessment and Intervention (3).** 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 Language Assessment and Intervention (3).** Fall, Spring. Overview of language disorders; principles and techniques of language evaluation and treatment. Four one-hour lectures. Prerequisites: CDIS 2250; CDIS major or permission of department chair.

**CDIS 3610 Diagnostic Audiology (3).** Spring. Anatomy and physiology of the auditory mechanism; audiometric pure-tone and speech testing; electrophysiological measures; otologic pathologies and associated hearing problems.

**CDIS 4010 Clinical Methods in Communication Disorders (4).** 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 Practicum in Communication Disorders (1-3).** 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 Fundamentals of Audiologic Rehabilitation (3).** 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 auditory training techniques. Prerequisites: CDIS major or permission of department chair.

**CDIS 4710 Introduction to Communication Disorders for the Classroom Teacher (3).** 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 Introduction to Research in Speech, Language and Hearing (2).** 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 General Seminar (1-4). 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 Independent Study in Communication Disorders (1-3). 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.

CERT Technical Certification

CERT 2100 Paramedic National Registration-Didactic (18). 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 Paramedic National Registration-Lab and Clinical (12). 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 Radiologic Technologist National Registration (American Registry of Radiologic Technologists)-Didact (20). 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 Radiologic Technologist National Registration (American Registry of Radiologic Technologists)-Lab/Cl (10). 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.

CHEM Chemistry

CHEM 1000 Introduction to Chemistry (3). 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. Approved for Distance Education.

CHEM 1090 Elementary Chemistry (3). 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 Elementary Chemistry Laboratory (1). 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 Elementary Organic Chemistry and Biochemistry (4). 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.

CHEM 1250 General Chemistry (5). Fall, Spring, Summer. The first in a two-course sequence for science majors and students in other science-related programs. Topics include atomic structure, molecular structure and bonding, common classes of chemical reactions, stoichiometric calculations, thermochemistry, and properties of gases. Both conceptual understanding and problem-solving skills are emphasized. Three lectures, one recitation, one three-hour laboratory. Prerequisites: 1) high school chemistry or CHEM 1090, and; 2) MATH 1200 or MATH 1220 or MATH 1230 or MATH 1260 or MATH 1280 or MATH 1300 or MATH 1310 or MATH 1340 or Math placement score of 41 or higher. Applicable to the BG Perspective (general education) natural sciences requirement. Extra fee.

CHEM 1270 General Chemistry (4). Fall, Spring, Summer. Continuation of the sequence beginning with CHEM 1250. Chemical equilibrium is a major theme of the course. Acid-base chemistry, buffers, and titration curves are studied in detail, as are solubility equilibria. Entropy and Gibbs free energy are introduced and related to equilibrium concepts. Additional topics include chemical kinetics and electrochemistry. Three lectures and one recitation per week. 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 General Chemistry Laboratory (1). Fall, Spring, Summer. A laboratory course taken in conjunction with CHEM 1270. One three-hour lab period. 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 General Chemistry (5). Fall. The first in a two-course sequence for well-prepared chemistry
majors, science majors, and students in other science-related programs. Topics include atomic structure, molecular structure and bonding, common classes of chemical reactions, stoichiometric calculations, thermochemistry, and properties of gases. Both conceptual understanding and problem-solving skills are emphasized. Three lectures, one recitation, one three-hour laboratory. Prerequisites: high school chemistry or CHEM 1090 and MATH 1220 or higher or Math placement score of 41 or higher. Applicable to the BG Perspective (general education) natural sciences requirement. Extra fee.

CHEM 1370 General Chemistry (4). 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. Extra fee.

CHEM 1380 General Chemistry Laboratory (1). 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. Extra fee.

CHEM 1770 Introduction to Forensic Science (3). Fall, Spring. A survey of the field of forensic science—the application of science to the law. Topics include the identification, proper collection/documentation, and analysis of evidence through microscopy, wet chemistry, spectroscopic methods, toxicology, serology, DNA typing, and fingerprinting. No prerequisites. For students not majoring in sciences. Not counted toward the minimum hour requirement for the chemistry major or minor. Applicable to the natural science BG Perspective requirement. Credit allowed for only one of CHEM 1770 or CRJU 3100.

CHEM 1940Q Chemistry and the Environment (3). Study of chemical principles through investigation of environmental phenomena and problems. Topics vary, but may include ozone depletion, global warming, traditional and renewable energy sources, and various forms of atmospheric and aquatic pollution. Not applicable to the chemistry major or minor. Prerequisite: Open only to Freshman students.

CHEM 1990 Introduction to Elementary Organic Chemistry (1). Fall, Spring. Not accepted toward chemistry major or minor. Provides a link between the CHEM 1250-CHEM 1270-CHEM 1280 sequence and CHEM 1170; concurrent with the last one-third of CHEM 1090. Three lectures, one three-hour laboratory. Prerequisites or corequisites: CHEM 1250 and consent of department.

CHEM 2010 Quantitative Chemical Analysis (3). Spring. Sampling, sample preparation, calibration, sources of error, propagation of uncertainty, statistics, and quality assurance as they relate to various analytical methods including titrations, gravimetry, electrochemistry, spectrophotometry, and chromatography. Two lectures, one three-hour laboratory. Prerequisite: C or better in CHEM 1270 and CHEM 1280 or CHEM 1370 and CHEM 1380. Extra fee.

CHEM 3060 Organic Chemistry (4). Fall, Spring, Summer. A survey course of organic chemistry including an introduction to biomolecules. For students who do not require full-year course. Not accepted toward chemistry major. Three lectures, one three-hour laboratory. Prerequisites: CHEM 1270 and CHEM 1280 or CHEM 1370 and CHEM 1380. Credit allowed for only one of CHEM 3060, 3410. Extra fee.

CHEM 3080 Basic Biochemistry (3). Spring, Summer. Three lectures. A survey course of biochemistry including biomacromolecules and metabolism. For students whose program does not require full-year course. Prerequisite: CHEM 3440 and CHEM 3450 or CHEM 3460 or C or better in CHEM 3060; BIOL 1040 and CHEM 2010 recommended. Credit allowed for only one of CHEM 3080, 4450.

CHEM 3090 Elementary Biochemistry Laboratory (1). Spring, Summer. Basic biochemical techniques. One three-hour laboratory. Prerequisite or corequisite: CHEM 3080 or CHEM 4450. Extra fee.

CHEM 3130 Special Topics in Chemistry (1-3). Fall, Spring. Specific topics of current interest in chemistry. May be repeated with different topics.

CHEM 3150 Teaching in the Chemistry Laboratory (3). Fall, Spring. Designed specifically for Adolescent to Young Adult Education majors in the Sciences content area. Investigates creative use of demonstrations and student laboratory exercises applicable to a high school chemistry course. Prerequisites: CHEM 1250, CHEM 1270 and CHEM 1280.

CHEM 3410 Organic Chemistry (5). Fall, Summer. The first course in a two-semester sequence of organic chemistry. The structure and reactivity of organic molecules are examined. Topics include mechanisms, stereochemistry, molecular orbital theory, conformational analysis, synthesis and modern instrumental techniques. In lab students will synthesize and study the properties of organic compounds. Prerequisites: CHEM 1270 and 1280 or CHEM 1370 and 1380. Credit allowed for only one of CHEM 3060, 3410. Extra Fee.

CHEM 3440 Organic Chemistry (3). Spring, Summer. Continuation of CHEM 3410. The second of a two-semester sequence of organic chemistry. Taken in conjunction with laboratory course CHEM 3450 or CHEM 3460. Biological compounds such as carbohydrates, lipids, amino acids, proteins and nucleic acids are studied in addition to the continued study of common functional groups. Other topics include polymers, catalysis, oxidation and reduction reactions, metabolism, percyclic
3. Organic Chemistry Laboratory (2). Spring, Summer. A laboratory course taken in conjunction with CHEM 3440. Experiences include chemical separations, examination of reaction selectivity, and multi-step synthesis. Chemical tests and modern instrumental techniques are used to identify compounds. Two three-hour lab periods. Prerequisite: C or better in CHEM 3410. Corequisite: CHEM 3440. Extra fee.

CHEM 3460 Organic Chemistry Laboratory (1). Spring, Summer. A laboratory course taken in conjunction with CHEM 3440. One three-hour lab period. Experiences include chemical separations and examination of reaction selectivity. Chemical tests and modern instrumental techniques are used to identify compounds. Prerequisite: C or better in CHEM 3410. Corequisite: CHEM 3440. Extra fee.

CHEM 3520 Physical Chemistry (3). Spring. Three lectures. A survey course of Physical Chemistry. For students whose program does not require full-year course. Prerequisites: CHEM 1270-CHEM 1280 or CHEM 1370-CHEM 1380, MATH 1310 or MATH 1340-1350. Prerequisites or corequisite: PHYS 2020 or PHYS 2120.

CHEM 3630 Advanced Inorganic Laboratory (2). Spring. One three-hour laboratory and a recitation. Designed to illustrate the experimental practice of inorganic chemistry through the preparation and characterization of organometallic and coordination compounds. Modern instrumental approaches and spectroscopic techniques are applied to the characterization of prepared compounds. Prerequisite: C or better in CHEM 3410. Extra fee.

CHEM 4020 Numerical Methods in Chemistry (1). 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 Physical Chemistry (4). Fall. Four lectures. Thermodynamics and quantum chemistry. Prerequisites: MATH 2320 and either PHYS 2120 or PHYS 2200 and either CHEM 1370 or CHEM 1270.

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

CHEM 4070 Integrated Analytical and Physical Laboratory (2). Fall, Spring. Two three-hour laboratories. Spectral, chromatographic and electroanalytical techniques; thermodynamic and kinetic measurements. Prerequisite or corequisite: CHEM 2010 and either CHEM 4050 or CHEM 3520. Extra Fee.

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

CHEM 4130 Undergraduate Research (1-3). Fall, Spring, Summer. Independent study and research. Three to nine hours of laboratory, one half-hour conference each week. 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 4160 Bioinorganic Chemistry (3). 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 Organic Reaction Mechanisms (3). 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 General Biochemistry (3). 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. Credit allowed for only one of CHEM 3080, 4450.

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


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

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

CHEM 4660 Spectroscopic Methods in Organic Chemistry (3). 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 4770 Forensic Chemistry (4). Fall. Three one hour lectures and one three hour lab per week. Qualitative, quantitative, and comparative analysis of forensic samples. Topics include drugs, toxicology, arson, explosives, firearms, colorants, polymers, glass, fingerprint development, and documents.
Prerequisites: CHEM 2010, CHEM 4080 and CHEM 4540.

CHEM 4830 Advanced Topics in Chemistry (1-3). Fall, Spring, Summer. Rigorous study of specific topics of current interest. May be repeated with different topics. Prerequisite: CHEM 3440 and CHEM 3450 or CHEM 3460 or consent of instructor.

CHIN Chinese

CHIN 1010 Elementary Language and Culture I (4). 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 BG Perspective (general education) humanities and arts and international perspective requirements.

CHIN 1020 Elementary Language and Culture II (4). 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 2000 Study Abroad (1-12). On demand. Intermediate language and culture study abroad. May be repeated up to 12 credit hours if topics differ.

CHIN 2010 Intermediate Chinese I (4). 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 Intermediate Chinese II (4). 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 Contemporary Chinese Culture (3). 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 3010 Advanced Chinese (3). Fall. Conversational language, writing, and reading for personal and pre-professional needs. Corresponding aspects of contemporary culture and grammar review. Prerequisite: CHIN 2010 or consent of the instructor.

CHIN 3020 Advanced Chinese II (3). Spring. Conversational language, writing, and reading for personal and pre-professional needs. Corresponding aspects of contemporary culture and grammar review. Prerequisite: CHIN 3010 or consent of the instructor.

CHIN 3120 Introduction to Chinese Literature (3). Fall, Spring. A survey of modern Chinese literature, including canonical works by Lu Xun, Mao Dun, Ding Ling, and others. Examination of various literary genres, trends, and aesthetic aspects of works. Readings, writings, and lectures in English.

CHIN 3200 Study Abroad (1-12). On demand. Advanced language and culture study abroad. May be repeated up to 12 credit hours if topics differ.

CHIN 4150 Chinese Film (3). Cultural and literary aspects of Chinese film. Emphasis may be on important developments in Chinese film styles, their aesthetic and historic qualities, or on interrelationships between Western filmmaking and Chinese filmmaking. Two class meetings and one required film screening per week.

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

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

CLCV Classical Civilization

CLCV 2410 Great Greek Minds (3). 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 2450 Word Power from Greek and Latin Roots (3). Spring. Terms and concepts derived from Greek and Latin occurring in English; designed for premedical, preprofessional, prelaw, language, sciences majors.

CLCV 3800 Classical Mythology (3). 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.
education) humanities and arts requirement.

**CLCV 3810 Roman Life (3).** 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 Ancient Drama (3).** 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 drammaturgy. No Latin or Greek required.

**CLCV 3880 Topics in Classical Civilization (1-3).** 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 Greek Civilization (3).** 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 Roman Civilization (3).** 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 Apprentice Teaching (3).** 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.

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**COMM Communication**

**COMM 1020 Introduction to Public Speaking (3).** Basic principles of public speaking. Focuses on informative and persuasive speaking in both extemporaneous and impromptu styles. Emphasizes adapting to diverse audiences, reducing communication apprehension, presenting in varied contexts, and using technology effectively.

**COMM 1990 Intercollegiate Forensic Activities (1).** 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.

**COMM 2010 Communication Theory (3).** 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: COMM 1020.

**COMM 2030 Small Group Communication (3).** 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: COMM 1020. This course has been approved for Arts & Sciences Group IV (Social Sciences) credit.

**COMM 2050 Business and Professional Speaking (3).** Fall, Spring. Principles of public communication, composition and public speaking, including practice. Prerequisite: COMM 1020.

**COMM 2070 Interpersonal Communication (3).** 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 COMM 2070 and COMM 3060. Prerequisite: COMM 1020.

**COMM 2090 Interpersonal Communication and Interviewing (3).** 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: COMM 1020.

**COMM 2100 Communicating in Global Contexts (3).** 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 COMM 2100 and INST 2100. Prerequisite: COMM 1020 and COMM 2010, or student must either be an International Studies major/minor or enrolled in the Global Village.

**COMM 3000 Communication Research Methods (3).** 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: COMM 1020 and COMM 2010.

**COMM 3030 Persuasion (3).** Fall, Spring, Summer. Theories and concepts of persuasive communication; attitude change, audience analysis and strategies of persuasion. Prerequisites: COMM 1020.

**COMM 3040 Leadership in Communication (3).** Fall. Conceptions, methods and techniques of leadership related to communication. Emphasis on understanding and application of communication theories to leadership. Prerequisites: COMM 1020. Approved for distance education.

**COMM 3060 Interpersonal Communication (3).** 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 COMM 2070 and COMM 3060.
COMM 3070  Organizational Communication (3). 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: COMM 1020 and COMM 2010, or consent of instructor. Approved for Distance Education.

COMM 3080  Argumentation (3). Fall, Spring, Summer. Principles of argumentation; case analysis and construction; practice in forms of debating using contemporary topics. Prerequisites: COMM 1020 and COMM 2010, or consent of instructor.

COMM 3100  Rhetorical Criticism (3). Fall. Theories and methods of criticism of rhetorical communication. The critical lens focuses on the important communicators and messages directed at intended audiences capable of modifying a significant rhetorical situation. Prerequisites: COMM 1020 and COMM 2010, or consent of instructor.

COMM 3110  Virtual Teams (3). 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: COMM 1020 and COMM 2010, or consent of instructor.

COMM 3500  Rhetoric of Sport (3). Fall, Spring. This course examines sport as a prominent site of communication in American and global culture. It is based on the critical engagement with sport as a symbolic means of creating communities and identities at the individual, community, national, and global levels. Course material addresses areas including, but not limited to, commercialization, globalization, media representation, mythology, nationalism, nostalgia, and performances of identity (such as class, gender and sexuality, and race). Prerequisites: COMM 1020 or consent of instructor.

COMM 3950  Workshop on Current Topics (1-3). 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: COMM 1020 and COMM 2010.

COMM 3990  Intercollegiate Forensic Activities (1). Fall, Spring. For juniors and seniors; similar to COMM 1990. May be repeated for four credits. Extra fee.

COMM 4020  Political Communication (3). 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: COMM 1020 and COMM 2010, or consent of instructor.

COMM 4040  Communication and Conflict (3). Fall, Spring. Communication skills in conflict situations in dyadic, group, and organizational settings; negotiation, mediation, and arbitration processes. Prerequisites: COMM 1020 or consent of instructor. Approved for distance education. Credit cannot be earned in both this course and MC 5040.

COMM 4050  Mediated Cultures and Identities (3). 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. Credit cannot be earned in both this course and MC 5050. Prerequisites: COMM 1020 or consent of instructor.

COMM 4060  Topics in Communication Studies (3). Fall, Spring, Summer. Selected topics or subject areas within the field of communication including, but not limited to, performance studies, communication and the law, communication and critical/cultural studies, and history of communication. May be repeated to six hours. Approved for Distance Education.

COMM 4070  Relational Communication (3). Fall, Spring, Summer. Analysis of current theoretical principles, practices, and theories in relational communication. Focus on relational skills with the aim of increasing understanding of effective communicative behavior in the context of personal relationships, including recognition of the roles of social exchange, rules, attribution, attraction, relational stages, power, impression formation and management. Prerequisites: COMM 1020 and COMM 2010, or consent of instructor.

COMM 4080  Intercultural Communication (3). Fall. Communication variables in intercultural contexts. Culture and meaning, communication values in intercultural dialogue, culture as symbolic worldview, culture shock, conflict resolution across cultures. Credit cannot be earned in both this course and MC 5080. Prerequisites: COMM 1020 and COMM 2010, or consent of instructor.

COMM 4090  International Communication (3). 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. Credit cannot be earned in both this course and MC 5090. Prerequisites: COMM 1020 and COMM 2010, or consent of instructor. Approved for Distance Education.

COMM 4120  Communication and Gender (3). 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).
COMM 4180 Communication Ethics (3). 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: COMM 1020 or consent of instructor.

COMM 4200 Discourses of Power (3). 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. Prerequisite: COMM 1020.

COMM 4220 Technology for Transnational Communication (3). 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: COMM 1020 or consent of instructor.

COMM 4300 Rhetoric of Social Movements (3). 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: COMM 1020 and COMM 2010, or consent of instructor.

COMM 4440 Health Communication (3). 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: COMM 1020 and COMM 2010, or consent of instructor.

COMM 4890 Communication Internship (1-10). Fall, Spring, Summer. Field experience in communication. Study of communication as intern in public or commercial agency. Open only to COMM majors in BAC program. Prerequisites: COMM 1020 and COMM 2010, 2.5 overall GPA, junior status and 12 hours of completed COMM courses. May be repeated up to 10 hours. Graded S/U.

COMM 4900 Problems in Communication Studies (1-3). 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: COMM 1020 and COMM 2010, or consent of instructor.

COMM 4910 Readings in Communication (1-3). Fall, Spring, Summer. Supervised readings on topics of current or specialized interest in communication. Prerequisite: COMM 1020, COMM 2010, junior standing, and consent of instructor and department chair. Graded S/U. Not repeatable.

CONS 1940Q Inquiry in Science and Technology (3). Built Environment: Transforming our world. This course examines the interactive factors of science, technology, engineering, and mathematics (STEM) that drive change from the vantage point of designing and constructing the built environment: buildings, dams, bridges, roads, infrastructure, and transportation systems. Students, as global citizens, will examine how breakthroughs in STEM lead to discovery and change. Inquiry will be made into issues of technology management and the environmental impact of construction equipment, materials, and processes through life cycles toward sustainable development.

CONS 2350 Introduction to Construction (3). 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 Construction Document Reading (3). 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. Prerequisite: CONS 2350. Extra Fee.

CONS 2800 Topics in Construction (1-3). Topics, trends and inquiry related to the Construction Management field including theory, technology, and professional practice utilizing systems, processes, equipment, materials and/or construction operations. May be repeated on approval of adviser up to 6 hours. Freshman or Sophomore standing.

CONS 3060 Residential Construction (3). 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 CM, AED. Extra fee.

CONS 3180 Construction Surveying (3). 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 CM, AED. Extra fee.

CONS 3200 Computer Application in Construction (3). 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 CM, AED. Extra fee.

CONS 3350 Construction Materials and Testing (3). 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 CM, AED. Extra fee.

CONS 3360 Structural Design (3). Fall, Spring. Introduction of the principles of Statics and Strength of Materials. Standard methods of comparing actual stresses to allowable stresses will be used 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 of laboratory. Prerequisites: PHYS 2010 and Matriculated in CM, AED. Extra Fee.

CONS 3370 Heating, Ventilating and Air Conditioning Systems (3). 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 CM, AED. Extra fee.

CONS 3380 Steel, Concrete and Masonry Design (3). Spring. Sizing and massing techniques to assist the design professional in preliminary layout and design. The course will present design concepts and supplement the design process with tables and charts. Expose students to computer application used in the industry for design of structural steel, structural concrete and masonry - load and non-load bearing walls. Prerequisites: CONS 3360 and Matriculated in CM, AED. Credit will not be given for both CONS 3380 and 4060.

CONS 3710 Building Information Modeling (BIM) for Constructors (3). A hands-on introduction to BIM. Students are introduced to the general concepts of virtual design and construction. Instruction on the Autodesk Revit family of software including Revit Architecture, Revit Structure, Revit MEP, and Navisworks. Comparison of traditional design and construction practices to BIM is explored. Approved for distance education. Prerequisites: ARCH 2710 and CONS 2390 and matriculation in CM or AED.

CONS 4000 LEED and Lean Fundamentals (3). Fall and Spring. Fundamentals of green building, sustainable design, sustainable construction, US Green Building Council "Leadership in Energy and Environmental Design" (LEED), lean design, lean construction, and green lean. Prerequisite: Junior or Senior standing or consent of instructor.

CONS 4060 Temporary and Concrete Structures for Construction (3). Fall, Spring. Design and construction of concrete structures. Placement of temporary formwork including sheathing, bracing and shores. Design of concrete slabs, beams and columns. Concrete Forming Systems with a focus on Constructability. Brief review of Masonry Techniques. Three hours of lecture. Prerequisites: CONS 3360 and Matriculated in CM, AED.

CONS 4110 Construction Safety and Health Management (3). 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 Construction Methods and Practices (3). Fall and Spring. Advanced course in commercial construction emphasizing superintendent's role in planning, inspecting, expediting and supervising construction operations. One and one-half hours of lecture and three hours laboratory. Prerequisite: Matriculated in CM, AED. Extra fee.

CONS 4370 Construction Equipment (3). 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 CM, AED. Extra fee.

CONS 4390 Estimating and Cost Control (3). 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 CM, AED. Extra fee.

CONS 4400 Construction Contracting (3). 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. Prerequisite: Matriculated in CM, AED, AMO, or ATM. Approved for distance education.

**CONS 4420 Construction Scheduling (3).** Fall and Spring.
Management utilizing critical path method, activity on arrow, Gantt chart 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 CM, AED, AMO, or ATM. Extra fee.

**CONS 4470 Trenchless Technology Construction (3).** 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. Extra fee. Credit can not be earned in both CONS 4470 and CONS 5470.

**CONS 4700 Construction Capstone Project (3).** 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 CM, AED. Extra fee.

**CONS 4800 Topics in Construction (1-3).** Topics, trends and inquiry related to the Construction Management field including theory, technology, and professional practice utilizing systems, processes, equipment, materials and/or construction operations. May be repeated on approval of adviser up to 6 hours. Junior or Senior standing.

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

### COOP Cooperative Education

**COOP 50 Cooperative Internship or Academic Internship (0).** 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.

### CRJU Criminal Justice

**CRJU 2100 Introduction to Criminal Justice (3).** 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. Approved for Distance Education.

**CRJU 2200 Law Enforcement in American Society (3).** 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 and CRJU 2100.

**CRJU 2300 Investigations: Theory and Practice (3).** 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 Report Writing for Criminal Justice (3).** 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 2500 Institutional and Community Corrections (3).** Spring.
This course provides detailed discussions and readings on the role of the correctional system in the United States. Specifically, it focuses on the history of corrections, the philosophies of corrections, institutional corrections, and corrections in the community. Prerequisites: CRJU major and CRJU 2100. Approved for Distance Education.

**CRJU 3100 Introduction to Forensic Science (3).** Fall, Spring.
This is a survey course in forensic science. The focus will be on the recognition, collection, preservation and analysis of the various types of physical evidence typically encountered at crime scenes. The goal of this class will be to provide students with a basic understanding of what forensics examination entails, and to prepare them for additional, more in-depth classes in forensic science. Prerequisite: CRJU-Forensic Investigation or BIOL Forensics major.

**CRJU 3200 Crime Prevention and Security (3).** 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 and CRJU 2100.

**CRJU 3300 Juvenile Justice Subsystems (3).** 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 and CRJU 2100.

**CRJU 3400 Drugs, Crime and Criminal Justice (3).** 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 and CRJU 2100.

**CRJU 3600 Digital Crime and Criminal Justice (3).** Fall, Spring. This course is designed to provide an overview of the nature and extent of technological advances and their
influence on the criminal justice system. Topics covered in the course include descriptions of the types of crimes committed using computer technology, theories addressing hackers and other types of digital crime, coverage of investigations and research techniques used to identify and mitigate digital crimes, and an overview of the legal strategies and tactics targeting these types of crime. Prerequisite: CRJU Forensic Investigation major and CRJU 3100.

CRJU 3950 Workshop - Current Topics (1-3). 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 and CRJU 2100.

CRJU 3951 Current Topics (3). Any semester. Special topics or issues in criminal justice, primarily of a current or unique interest to students/practitioners. May be repeated if topics differ.

CRJU 4100 Victimology (3). 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 and CRJU 2100.

CRJU 4200 The Criminal Courts (3). 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 and CRJU 2100.

CRJU 4300 Procedural Rights (3). 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. Prerequisites: CRJU major, CRJU 2100, and CRJU 4200.

CRJU 4400 Law, Evidence and Procedure in Forensic Science (3). Fall, Spring. This class provides an overview and examination of the legal aspects of physical evidence including rules of evidence, procedural rules, and the role of expert witnesses. The course also includes direct and cross-examination of students in a moot court setting. Prerequisite: CRJU Forensic Investigation, BIOL Forensics or CHEM Forensics Major.

CRJU 4700 Independent Study in Criminal Justice (1-3). Fall, Spring, Summer. Student designs and carries out study or special project in area of interest. Prerequisite: CRJU major or consent of instructor, and CRJU 2100. May be repeated.

CRJU 4800 Senior Seminar in Criminal Justice (3). 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.

CRJU 4860 Workshop in Criminal Justice (1-3). On demand. Study of a particular topic in criminal justice. Topics may vary. May be repeated. Prerequisite: CRJU major or instructor permission, and CRJU 2100.

CRJU 4910 Practicum (1-12). 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 Practicum Seminar (3). 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.

CS - Computer Science

CS 1000 Computer Basics (3). 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 1800 Introductory Topics (1-3). 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 Introductory Topics (1-3). 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 1930Q Inquiry in Individuals and Society (3). Introduction to ethical issues, social issues, and value conflicts that arise in the use of and adoption of computer technologies. Examines how ethical and technical problems are related. Explores effects of computer technologies on community life, family life, human relationships, education, and careers. Topics include personal records, freedom of speech, music sharing,
Copyrights, social issues, computer crime, and other similar issues. Group work and writing experience.
Prerequisite: Open only to freshman students.

CS 2010 Programming Fundamentals (3). 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: Math placement score of 32 or MATH 1200 or MATH 1210 or higher.

CS 2020 Object-oriented Programming (3). 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: Corequisite of MATH 1260 or MATH 1280 or MATH 1300 (Precalculus) or higher and grade of C or better in CS 2010.

CS 2170 Computer Organization (3). 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: Grade of C or better in CS 2010.

CS 2800 Intermediate Topics (1-3). 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 3000 Professional and Societal Issues in Computing (3). Summer. Impact of computers, the Internet and related computer technology on society and the social forces underlying 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: Grade of C or better CS 2010. Approved for distance education.

CS 3010 Information Management Technologies (3). 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: Grade of C or better in CS 2020.

CS 3140 Web Application Development (3). 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 Windows Application Development (3). 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 2020.


CS 3270 Operating Systems and Networks (3). 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: Grade of C or better in CS 2020 and CS 2170.

CS 3350 Standard Data Structures and Algorithms (3). Fall. Advanced programming concepts. Adaptation and use of standard class libraries and generic algorithms. Prerequisite: MATH 2220 or MATH 3220 and Grade of C or better in CS 2020.

CS 3540 Introduction to Software Engineering (3). Fall. Overview of software engineering as a discipline. Software life-cycle models and phases of the software development process. Introduction to Human Computer Interaction (HCI) and their topologies. Communication hardware. Networks and their topologies. Communication protocols and client/server environments with implication for operating system services and user programs. Prerequisites: Grade of C or better in CS 2020.

CS 3600 COBOL Programming (3). 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 Introduction to Unix (1). Fall. The Unix operating system; utilities, file structure; pipes; filters; shell programming. Prerequisite: CS 1010 or CS 2010. Graded S/U.

CS 3720 Unix System Administration (2). 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  Special Topics in Computer Science (1-3). 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  Practicum in Computer Science (1-6). For students working in internship or co-op programs. Written report required. Does not apply to minor in computer science. May be repeated to three hours. Students working through the internship office may earn up to six hours of credit. Prerequisite: consent of department. Graded S/U.


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

CS 4100  Formal Language Theory (3). 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 4120  Design and Analysis of Algorithms (3). Fall. Algorithms for solving problems that occur frequently in computer applications. Basic principles and techniques for designing and analyzing algorithms. Introduction to computational complexity, divide-and-conquer, dynamic programming, greedy approach, and graph algorithms. Prerequisites: CS 3350 and MATH 2220 or equivalents.

CS 4170  Introduction to Parallel Computing (3). 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  Artificial Intelligence Methods (3). Intermediate AI programming with application to representative problems requiring searching, reasoning, planning, matching, deciding, parsing, seeing and learning. Prerequisite: CS 3350.

CS 4250  Computer Graphics (3). 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  Data Communication and Networks (3). 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  Optimization Techniques (3). 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  Techniques of Simulation (3). 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  Numerical Analysis (3). 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 4540  Software Engineering Project (3). Issues underlying the successful development of large scale software projects using software engineering methodologies. Team based software design and architecture, testing, and deployment. Principles of reusability, portability, interoperability, software metrics and management. Prerequisites: CS 3540.


CS 4640  Software Development (3). 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  Seminar in Computer Applications (1-3). Prerequisite: consent of instructor. May be repeated up to six hours.

CS 4900  Independent Project (1-3). Readings and/or computer implementations in area of interest to individual student. Does not apply to a
CST - Computer Science Technology

CST 1000  Introduction to Programming Logic and Design (1). 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  Information Technology Ethics (1). 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  Introduction to Operating Systems (3). 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  Introduction to Web Page Development (1). 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 Education.

CST 1360  Advanced Web Page Development (1). 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  Networking Fundamentals (2). 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  Beginning Router Configuration (2). Basic router elements. IP addressing and configuration. Router user interface, setup and configuration. Fundamentals of TCP/IP. Prerequisite: CST 1410.

CST 1430  Intermediate Routing, Switching, and WAN Technologies (3). 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  Introduction to Network Cabling (2). 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  Network and Internet Principles (3). 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  Helpdesk Troubleshooting (3). 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  User Support for Desktop Applications (3). 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  Microcomputer Hardware Systems (3). 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 2750  Microcomputer Hardware Systems (3). 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  Network and Internet Implementation (3). Installation and configuration of microcomputer network and Internet servers. Networking hardware, software, protocols, functions. Two hours lecture, two hours lab weekly.
DANC - Dance

DANC 1010  Folk and Square Dance (1). 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  Ballroom Dance I (1). 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  Jazz Dance Technique and Theory I (2). 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  Tap Dance I (1). 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 four hours.

DANC 1150  Modern Dance Technique and Theory I (3). 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  Ballet Technique and Theory I (2). 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  Dance Appreciation (3). Fall. An introductory overview of dance as it pertains to culture, aesthetics, the arts, recreation, entertainment and the creative process.

DANC 2070  Jazz Dance & Pop Forms (2). 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  Modern Dance Technique and Theory II (3). 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  Ballet Technique and Theory II (2). 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  Dance Repertory I (1). 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  Modern Dance Technique and Theory III (3). 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  Theory and Methods of Teaching Dance (3). 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  Dance Composition (3). 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  Dance in World Cultures (3). 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 Practicum in Dance I (1-4).** 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 Workshop on Current Topics in Dance (1-3).** Intensive study of selected topics in dance. May be repeated up to 12 credit hours if topics are different.

**DANC 4220 Dance Repertory II (1).** 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 Dance History I (3).** Fall alternate years. The effects of culture, philosophy, persons and events on dance from primitive times to 1900s.

**DANC 4250 Dance History II (3).** Spring alternate years. Dance developments from 1900 to present; influential events, personalities, technologies and philosophies.

**DANC 4260 Dance Production (3).** Spring. Classroom and hands-on experience; problems and techniques in dance lighting, sound, costing, direction, publicity and general management.

**DANC 4270 Choreography & Design (3).** 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 Independent Study in Dance (1-3).** 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 Practicum in Dance II (1-6).** 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.

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**DESN - Mechanical Design**

**DESN 2050 Desn Representative II (3).** 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 Problems in Design Technology (1-3).** 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 Problems in Design Technology (1-3).** 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.

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**DMS - Diagnostic Medical Sonography**

**DMS 1000 Introduction to Sonography (1).** An overview of the philosophies, principles and practices of diagnostic medical sonography. The role of the sonographer in an imaging department and the introduction of other imaging modalities along with basic bioeffects, scope of practice and professional interaction skills are presented. Emphasis is on professionalism, prevention of musculoskeletal injuries, sonographic vocabulary, proper annotation and image orientation. One hour lecture. Prerequisite: Admission to the program and/or permission of the instructor. Offered at Firelands only.
DMS 1010 Patient Care in Sonography (2). An overview of the foundation of providing patient care and comfort. Topics on infection control, life-threatening situations, patient positioning, ethical issues, legal standards and the chain of command in the workplace are discussed. An overview of regulatory agencies and accreditation of a department and board certification of sonographers is presented. Two hours lecture. Co-requisites: DMS 1110/1120. Prerequisite: Admission to the program or permission of instructor. Offered at Firelands only. Approved for Distance Education.

DMS 1110 Sonographic Procedures I (4). Orientation to the clinical setting, general procedural considerations for examinations according to national guidelines and the protocol of the clinical affiliate. Sonographic examinations of the abdomen, superficial structures, non-cardiac chest is presented. Four hours lecture. Co-requisite: DMS 1120. Admission to the program or permission of the instructor. Offered at Firelands only.

DMS 1120 Sonographic Procedures Lab I (1). Laboratory experience to complement the didactic portion and allow practical application of performing examinations in a controlled setting under the direction of program faculty. Two hours lab. Co-requisites: DMS 1010 and DMS 1110. Prerequisites: admission to the program or permission of the instructor. Offered at Firelands only.

DMS 1210 Sonographic Procedures II (4). Orientation to the clinical setting, general procedural considerations for examination according to national guidelines and the protocol of the clinical affiliate. Sonographic examinations of the female pelvis, first, second, and third trimester pregnancy, and postpartum pelvis. Four hours lecture. Prerequisites: DMS 1110/1120. Co-requisites: DMS 1220 and DMS 1410. Admission to the program or permission of the instructor. Offered at Firelands only.

DMS 1220 Sonographic Procedures Lab II (1). Laboratory experience to complement the didactic portion and allow practical application of performing sonographic examinations in a controlled setting under the direction of program faculty. Two hours lab. Co-requisites: DMS 1210 and DMS 1410. Prerequisites: DMS 1110/1120. Admission to the program or permission of instructor. Offered at Firelands only.

DMS 1410 Sonographic Physics and Instrumentation I (2). Established a basic knowledge of acoustic physics, Doppler ultrasound principles and ultrasound instrumentation. Operator control options, acoustic artifacts, instrument options and transducer selection are also presented. Two hours lecture. Prerequisites: DMS 1110, DMS 1120. Admission to the program or permission of the instructor. Corequisites: DMS 1210, 1220. Offered at Firelands only.

DMS 1810 Directed Practice (2). Clinical application of the knowledge and skills necessary to perform standard sonographic procedures and produce images of optimal diagnostic quality under the direction of program faculty. Minimum of 150 hours contact hours. Prerequisites: DMS 1010 and DMS 1110/1120. Admission to the program or permission of the instructor. Offered at Firelands only.

DMS 1820 Directed Practice (3). Clinical application of the knowledge and skill necessary to perform routine sonographic procedures. Includes adapting to pertinent patient care procedures, principles of psychological support, emergency conditions and procedures under the direct supervision by the faculty. Minimum of 225 hours contact time. Prerequisites: DMS 1810, DMS 1210/1220, and DMS 1410. Admission to the program or permission of instructor. Offered at Firelands only.

DMS 2110 Advanced Diagnostic Studies I (2). Advanced study of the clinical applications of abdomen, small parts, gynecology, and obstetrics. Lecture topics include the pathology, image analysis, clinical signs and symptoms, related diagnostic procedures, invasive procedures, and typical sonographic patterns of common and rare conditions and abnormalities encountered in the clinical setting: two hours lecture. Prerequisite: DMS 1410 and admission to the program or permission of the instructor. Co-requisite: DMS 2410. Offered at Firelands only.

DMS 2120 Advanced Diagnostic Studies Lab I (1). Laboratory experience to complement the didactic portion and allow practical application of performing sonographic examinations in a controlled setting under the direction of program faculty. Proficiency in the performance of physiologic testing as relates to the vasculature in a controlled setting under direction of program faculty. Two hours lab. Prerequisites: DMS 1410. Admission to the program or permission of instructor. Co-requisite: DMS 2110 and DMS 2410. Offered at Firelands only.

DMS 2210 Advanced Diagnostic Studies II (2). Advance topics in sonography including: pediatric abdomen, neonatal brain, breast, vascular imaging, muscular skeletal, and transplanted organs. Students will review the necessary sterile technique preceding invasive and intraoperative procedures and learn the applications of contrast agents in ultrasound. Other imaging techniques will be discussed as well as the principles guiding the field of sonography. Two hours lecture. Prerequisite: DMS 2110/2120 and admission to the program or permission of the instructor. Corequisite: DMS 2220. Offered at Firelands only.

DMS 2220 Advanced Diagnostic Studies Lab II (1). Laboratory experience to complement the didactic portion and allow practical application of performing of advanced sonographic examinations in a controlled setting under the direction of program faculty. Related imaging, laboratory, and functional testing procedures are discussed. Two hours lab. Prerequisites: DMS 2110/2120. Admission to the program or
permission of instructor. Co-requisite: DMS 2210. Offered at Firelands only.

DMS 2410 Sonographic Physics and Instrumentation II (2).
Advanced physics applications with introduction of hemodynamics and doppler concepts. Application of basic physics concepts covered. Minimization of patient exposure to acoustic energy is discussed. Emerging technologies are presented. Two hours lecture. Prerequisite: DMS 1410 and admission to the program or permission of the instructor. Offered at Firelands only.

DMS 2510 Capstone Seminar (1).
Preparation for the American Registry of Diagnostic Medical Sonography (ARDMS) registries in Sonography Principles and Instrumentation (SPI), Abdomen/Small Parts and OB/GYN. Topics to prepare the students for entry-level employment will be emphasized. One hour lecture. Prerequisite: DMS 2210, 2410, and admission to the program or permission of the instructor.

DMS 2810 Directed Practice (4).
Clinical application of the knowledge and skills necessary to produce routine and advanced sonographic procedures. Includes adapting to pertinent patient care procedures, principles of psychological support, emergency conditions, and procedures under the direct supervision by the faculty. Minimum of 300 hours of contact time. Prerequisite: DMS 1820 and admission to the program or permission of the instructor. Grade S/U. Offered at Firelands only. Extra Fee.

DMS 2820 Directed Practice (4).
Clinical application of the knowledge and skills necessary to produce routine and advanced sonographic procedures. Includes adapting to pertinent patient care procedures, principles of psychological support, emergency conditions and procedures under the direct supervision by the faculty. Minimum of 300 hours contact time. Prerequisite: DMS 2810 and admission to the program or permission of the instructor. Grade S/U. Offered at Firelands only. Extra Fee.

DMS 2830 Directed Practice (3).
Clinical application of the knowledge and skills necessary to produce routine and special sonographic procedures. Capstone project presentation is required. Minimum of 225 hours contact time. Prerequisite: DMS 2820. Admission to the program or permission of the instructor. Grade S/U. Offered at Firelands only.

ECET - Electronics & Computer Engineering Technology

ECET 1910 Energy, Power, Instrumentation and Control (3).
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.

ECET 1940Q Inquiry in Science and Technology (3). This is an inquiry course that examines the technologies in generation of electric energy such as wind, tidal, solar, regenerative as well as "smart" technologies used to conserve energy in power consumption and transmission/distribution.

ECET 1960 Electrical-Electronic Systems (3). 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.

ECET 2050 Renewable Energy and Energy Sustainability (3). Spring and Summer on demand. This course discusses renewable energy systems such as those that use solar energy, wind, wave energy, and fuel cells. It also discusses how the energy that is generated can be conserved with systems such as electric and hybrid vehicles. It encourages students to think critically about how our energy is generated and consumed and how it effects the environment and the economy. Approved for Distance Education. Prerequisite: None.

ECET 2400 Electric Circuits (3).
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.

ECET 2410 Electronic Circuits (3).
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: ECET 2400 or permission of instructor. Extra fee.

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

ECET 2480 Industrial Equipment and Controls (3). 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: ECET 2410. Extra fee.

ECET 2490 Digital Electronic Components and Systems (3).
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: ECET 1910 or ECET 1960 or consent of instructor. Extra fee.

ECET 2500 Real Time Microcomputer Systems for Industrial Control (4). 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: ECET 2490 or consent of instructor. Extra fee.

ECET 3000 Electric Machinery and Controls (3). Spring. Electric motors, generators, power electronic controls; operating characteristics, selection, testing and control of direct current, single and three-phase machinery as found in renewable energy and other applications. One and one-half hours of lecture and three hours laboratory. Prerequisite: ECET 2410. Extra fee.

ECET 3100 Programmable Logic Controllers (3). 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: ECET 1960. Extra fee.

ECET 3410 Electronic Devices (3). 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: ECET 2410 or consent of instructor. Extra fee.

ECET 3440 Electronic Communication Circuits (3). Spring. The principles of electronic circuits as applied to large and complex telecommunication systems. Topics include frequency response and use of Fourier Series/Transforms. One and one-half hours lecture and three hours laboratory. Prerequisite: ECET 2410. Extra fee.

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

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

ECET 3580 Digital Electronics (4). 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: ECET 2410 or PHYS 2400.

ECET 3860 Digital Communication Networks I (3). 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.

ECET 4410 Instrumentation (3). Fall. Industrial instrumentation, measuring thermal, mechanical, fluid and electric phenomenon. Statistical methods for data analysis. 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: ECET 2410 and CS 2010 or consent of instructor. Extra fee.

ECET 4450 Wireless Communication Systems (3). Fall. A study of the concepts of signals (continuous/discrete), 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: ECET 3440. Extra Fee.

ECET 4530 Digital Computer for Process Control (3). 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. Application of differential equations and Laplace transform method in control systems. One and one-half lecture and three hours laboratory. Prerequisites: ECET 2490 or CS 2170, CS 2010, MATH 1310 or equivalent. Extra Fee.

ECET 4800 Topics in Electronics and Computer Technology (1-3). Current trends and developments in electronics and computer technology as they have significance to equipment, materials, and processes as related to practicing and developing electronic and computer technology professionals. May be repeated upon approval of an ECET faculty advisor.

ECET 4860 Digital Communication Networks II (3). Fall. Digital communication and networking concepts and practices with emphasis on wide area network (WAN) topologies. Concepts topics include: WAN hardware/management. Practices include those necessary for the creation of WANs. Data encoding, noise, and error probability are examined. One and one-half hours lecture and three hours laboratory. Prerequisite: ECET 3860. Extra fee.

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

ECON 1930Q Inquiry in Individuals and Society (3). Fall. This course will encourage students to examine particular economic situations with the aid of economic models and data. Students will be expected to develop competing explanations and will find ways to distinguish among the explanations. Writing and presentations are expected activities. Prerequisite: Open only to Freshman students.

ECON 2000 Introduction to Economics (3). 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 Principles of Microeconomics (3). 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 Principles of Macroeconomics (3). 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 2040 Economics for Social Studies Teachers (3). Fall, Spring. Scarcity, opportunity costs, markets, market failure, trade, full employment, unemployment, price stability, income distribution, economic security, economic freedom, consumer sovereignty, efficiency. Applications as they relate to the teaching of economics and in making economics decisions will be employed to demonstrate the concepts and to prepare the education major for teaching economics. Does not count toward the total hours of economics required for BSBA, BS in Economics, or BA in Economics. Education majors only. Precludes credit for ECON 2000.

ECON 3010 Price Theory and Applications (3). 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 1200 or MATH 1220 or equivalent or higher. No credit is allowed toward the BSBA degree or the BS in economics degree.

ECON 3020 Intermediate Microeconomic Theory (3). 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 Intermediate Macroeconomic Theory (3). 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 Managerial Economics (3). 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 STAT 2120 or STAT 2200.

ECON 3110 Money and Banking (3). 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 Labor Economics (3). 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 Poverty and Discrimination (3). 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 Environmental Economics (3). 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  International Trade and Finance (3). 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  Mathematical Economics (3). 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  Econometrics (3). Fall. Statistical techniques used to measure economic data and to test validity of theoretical models. Prerequisite: STAT 2120 or STAT 2200.

ECON 4050  Game Theory (3). 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  Monetary and Fiscal Policy (3). Spring. Objectives, means and analysis of monetary and fiscal control; effect on total economic activity. Prerequisite: ECON 3030 or ECON 3110.

ECON 4220  Labor Relations Policy (3). 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  Public Health Economics (3). 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  Public Finance (3). 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 4410  Women, The Economy and Society (3). 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 4420  Markets and the Law (3). The law is one form of conflict resolution. Markets are another; democracy is a third. This course focuses on how these conflict resolution systems interact. The underlying logic of each will be discussed along with applications. Assessment of the strengths and weaknesses as the systems are applied will be part of the course. Prerequisites: ECON 2020 and 2030, LEGS 3010 or consent of the instructor.

ECON 4520  International Monetary Economics (3). 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  Economic Development (3). Fall. Obstacles to and current efforts for promotion of economic growth in emerging nations. Prerequisite: ECON 2020 or consent of instructor.

ECON 4620  Urban Economics (3). 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.

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

ECON 4730  History of Economic Thought (3). Fall. Development of economics and economic analysis from Adam Smith to J.M. Keynes. Prerequisites: ECON 2020 and ECON 2030.

ECON 4740  Seminar in Contemporary Economic Problems (3). On demand. Interested students should consult with chair of department.

ECON 4910  Studies in Economics (1-3). 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  Readings for Honors in Economics (3-6). 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.

ECT - Electronics & Computer Technology

ECT 1000  Electric Codes and Regulations (1). 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 2440  Communication Circuits (3). 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  Communications Systems (4). 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 2900  Studies in Electronic Technology (1-3). Experimental study projects, seminars and workshops dealing with topics in industrial technology. May be repeated up to six credits if topics vary.

EDFI - Educational Foundations & Inquiry

EDFI 2020  Introduction to Teaching (3). 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 include the examination and application of 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.

EDFI 3000  Academic Service Learning Applied to Educational Psychology (1). 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.

EDFI 3010  Educational Psychology Applied to Early Childhood (3). 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. Corequisite: EDFI 3000: 20 hours field experiences. Prerequisites: EDHD 2010, Introduction to Education; HDFS 2210, Child Development; and sophomore status. Credit not allowed for both EDFI 3010 and EDFI 3020.

EDFI 3020  Educational Psychology (3). 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 or HDFS 1930Q and sophomore status. C/F hrs.: 20.

EDFI 3030  Educational Psychology Applied to Adolescent Development (3). 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: HDFS 1930Q or PSYC 1010 and sophomore status.

EDFI 3950  Workshop on Current Topics (1-3). 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.

EDFI 4020  Assessment and Evaluation in Education (3). 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.

EDFI 4050  Psychological Foundations of Classroom Management (3). 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.

EDFI 4080  Education in a Pluralistic Society (3). 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.

EDFI 4160 Philosophy of Environmental Education (3). Concepts and processes of environmental education including theories such as Toledo model, Strand approach, Environmental Studies Project, Boulder and other representative model.

EDFI 4170 Urban Education (2). 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.

EDFI 4200 Practicum in Individual and Small Group Instruction (1-2). 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.

EDFI 4600 Sex Role Stereotyping and Sex Discrimination in Education (2). Education as influential institution and process in society in terms of sexism in educational materials, curriculum, structure, federal, state, local policy responses to this concern; consideration and development of other policies for action regarding sex equity in education.

EDFI 4800 Seminar in Educational Foundations (3). In-depth study of selected topics, offered on demand. May be repeated once if subject matter is different.

EDFI - Educational Intervention Services

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

EDFI 4900 Problems in Education (1-3). 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.

EDDI 2310 Teaching Students with Exceptionalities (3). Provides an overview of the development and characteristics of students with exceptional learning needs; historical, philosophical, and legal issues in special education; instructional strategies and adaptations of learning environments; and consultation and collaboration to meet the needs of all students. Prerequisite: EDFI 2310

EDDI 3100 Second Year Field Experience (3). 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. Approved for distance education.

EDDI 3240 American Sign Language I (3). 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.

EDDI 3250 American Sign Language II (3). 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: EDDI 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.

EDDI 3260 American Sign Language III (3). 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: EDDI 3250 or consent of instructor.

EDDI 3270 American Sign Language IV (3). 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: EDDI 3260 or consent of instructor.

EDDI 3950 Workshop on Current Topics (1-3). 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.

EDDI 4100 Third Year Field Experience (3). 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. Graded.

**EDIS 4110**  Phonics Instruction for Students with Special Needs (3). 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**  Content Literacy for Students with Special Needs (3). 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**  Assistive Technology in Special Education (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 EDIS 4350. 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 4220**  Classroom Management (3). 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**  Applied Behavior Analysis (3). 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 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 4240**  Consultation and Collaboration with Colleagues and Families (3). 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 4250**  Transitions and Students with Special Needs (3). 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 2310, 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 4290**  Assessment of Young Children (3). 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 or EDFI 3030. Graded. Extra fee.

**EDIS 4350**  Young Children with Disabilities: Risk Factors and Disabilities (3). Fall, Spring. Etiology, characteristics, classifications, and implications of common disabilities in young children. Also includes multifactored evaluation, eligibility for special education services, service delivery models, and individualized education/intervention plans. Prerequisite: HDFS 2210.

**EDIS 4360**  Introduction to Education of Students who are Deaf/Hard of Hearing (3). Spring. History, philosophy, psychology and education of students who are deaf/hard of hearing. Definitions of types and classifications of hearing impairments. Cognitive, social, and linguistic development of individuals with hearing loss and implications for education. Prerequisite: EDIS 2310 or EDIS 4350. 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 4400**  Fourth Year Seminar/Field Experience: Application (3). Fall, Spring. Putting into practice the methods taught in previous and concurrent methods classes. Field based activities will be integrated with the methods courses. Prerequisites: EDIS 2310, EDIS 4100, EDIS 4110 (or EDFI 3000), EDIS 4120, concurrent enrollment in EDIS 4410 and EDIS 4420. C/F hrs.: 125. Graded.

**EDIS 4410**  Reading and Writing Instruction for Students with Special Needs (3). 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 Reading and Writing Diagnosis and Assessment for Students with Special Needs (3). 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 Adapting Curriculum and Instruction for Students with Special Needs (3). 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. Graded. Extra fee.

EDIS 4450 Math, Social Studies, and Science Instruction for Students with Special Needs (3). Fall, Spring. Methods and materials for math, social studies and science instruction. 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. Graded. Extra fee.

EDIS 4460 Physical and Medical Management (3). 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 Adapting Curriculum for Students with Moderate to Intensive Special Needs (3). Fall. Adapting the curriculum to meet the requirements of students with moderate-intensive needs (life skills, job skills, leisure pursuits). Prerequisites: Moderate-Intensive Intervention Specialists; GPA 2.75. Graded.

EDIS 4480 Implementing Inclusive Environments (3). 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 KNS 4330, or consent of instructor.

EDIS 4590 Introduction to Manually Coded English (3). 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 Instruction through Manually Coded English: Classroom Techniques and Applications (3). Fall. Investigation of manual English in classroom use, implementation procedures and implications for older students, 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 Curriculum Design for Students who are Deaf/Hard of Hearing (3). 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. In conjunction with EDIS 4700. Prerequisite: EDIS 4360.

EDIS 4650 Language and Literacy Instruction of Students who are Deaf and Hard of Hearing (4). Fall. Comparative language development of students who are d/hh with stages and attainments of normally-hearing children. Methods of language instruction of students who are d/hh and integration of language throughout the curriculum. Special focus on literacy: needs and strategies in reading/writing instruction. In conjunction with EDIS 4700. Prerequisites: CDIS 2250, EDIS 4360. Extra fee.

EDIS 4660 Speech Production, Instruction, and Speech reading for Students who are Deaf and Hard of Hearing (3). Fall. Basic anatomy and physiology of the speech mechanism, disorder terminology, phonetic transcription techniques. Methods for assessing stimulation and remediation speech problems evidenced with d/hh. Strategies for collaborating with and extending the work of SLP in the classroom. In conjunction with a practicum in school speech and D/HH classrooms. Prerequisite: EDIS 4360.


EDIS 4700 Practicum with Students who are Deaf and Hard of Hearing (3). 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: CDIS 2310, EDIS 4360.
EDIS 4820 Practicum in Residential Settings (3). 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 Internship in Developmental Disabilities and Habilitation (8-16). 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 Job Coaching (3). 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 4850H Job Coaching (3). 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 Problems in Education (1-3). 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 Teaching Internship for Intervention Specialists (1-13). 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. Corequisite: EDIS 4930. C/F hrs.: 300. Extra fee.

EDIS 4930 Student Teaching Seminar for Intervention Service Educators (3). Fall, Spring. A forum for discussing and reflecting on the student teaching internship. Topics include advanced lesson planning and instruction; effect on student learning; teacher performance assessment; residency program and transitioning to a professional career. Co-requisite: EDIS 4920. Transportation required. Graded

EDTL - Educational Teaching & Learning

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

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

EDTL 2010 Introduction to Education (2). 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. Extra fee.

EDTL 2020 Contemporary Perspectives on Teaching in the Middle Grades (3). This course will provide the students with their first specific introduction to middle childhood philosophy with a focus on urban education. This three-credit course will include a field experience in an urban, middle-level classroom. Prerequisite: EDHD 2010. C/F Hrs.: 20. Transportation required.

EDTL 2040 Foundations of Early Childhood Education (3). 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 2290Introduction to the Teaching and Learning of Foreign Languages (3). Fall. 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 Introduction to Educational Technology (2). 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 Introduction to Reading and Literacy for the Middle Grades (3). 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 2502 Upper Elementary Science Instruction (3). Fall, Spring, Summer. A systematic examination of trends and issues affecting a contemporary program of upper elementary/middle school science. Attention is focused on methods, objectives and materials as applied to
individualized diagnostic and prescriptive instruction. Prerequisite: Sophomore status. Open only to Middle Childhood Education majors with a concentration in science. Approved for distance education.

EDTL 2710 Introduction to the Teaching of the Integrated Language Arts (ILA) (3). Spring. 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: EDTL 2740. Transportation required.

EDTL 2740 Introduction to Secondary Mathematics (3). Spring. 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: MATH 2010, "C" or higher in MATH 1310 and at least 30 completed semester hours. Transportation required.

EDTL 2750 Introduction to the Teaching of Science (3). Spring. 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: MATH 1310. Transportation required.

EDTL 2760 Introduction to the Teaching of Social Studies (3). Spring. 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 3000 Service Learning (1). Service learning links community service with academic study. Students learn through active participation in thoughtfully organized service. May be repeated. Graded S/U.

EDTL 3010 Phonics, Fluency, and Word Study (3). Spring. 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: EDTL 3010. Extra fee.

EDTL 3020 Computer Utilization for the Middle Childhood Teacher (3). Spring. Appropriate practices in integrating computer technologies in the middle childhood curriculum. Evaluation of digital resources, including software for middle childhood classrooms. Exploration and critical analysis of issues related to digital technologies in education. Prerequisites: EDTL 2300; EDTL 3020 or EDFI 3030 and Junior standing. Credit not given for more than one of EDTL 3020, EDTL 3030, and EDTL 3110.

EDTL 3030 Computer Utilization for the Early Childhood Teacher (3). Spring. 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 3010 or EDFI 3020 and Junior standing. Credit not given for more than one of EDTL 3020 and EDTL 3030. Extra fee.

EDTL 3040 Norwegian Government and Politics (3). Fall, Spring. The course examines the political and governmental structures of Norway. Prerequisite: EDFI 3030. Extra fee.

EDTL 3050 Introduction to Teaching and Learning in Early Childhood Education (3). Fall, Spring. The course introduces graduate students to the professional field of early childhood education. Prerequisite: EDFI 3030. Extra fee.

EDTL 3100 Literacy for Young Learners (3). 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 ECE Field Block I. Transportation required. Prerequisite: admission to early childhood education program. Extra fee.

EDTL 3110 Phonics, Word Recognition, and Language Skills for Young Children (3). 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.
in a kindergarten or primary grade classroom. 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). Graded S/U. Extra fee.

EDTL 3220 Literacy Across the Early Childhood Curriculum (3). Fall. 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 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 3230 Early Childhood Mathematics Methods (3). Fall. 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 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 3240 Science Methods for the Early Childhood Teacher (3). Fall. 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 Social Studies Methods for the Early Childhood Teacher (3). Fall. 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 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 3260 Literacy Assessment in the Early Childhood Education Classroom (3). Fall. 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 grade of C or better in all Field Block I courses (HDFS 3200, HDFS 4200, EDIS 4290, EDTL 3100, and EDTL 3110).

EDTL 3400 Teaching Adolescents Middle Grades through High School (3). Fall, Spring, Summer. Middle level philosophy; planning, teaching, management, and professionalism for teachers of middle grades and above. Prerequisites: 2.8 cumulative and 2.8 major or concentration area GPAs; attainment of 60 semester hours, grade of C or better in EDHD 2100, and EDIF 3020 or 3030. AYA majors must also have one of EDTL 2290, EDTL 2710, EDTL 2740, EDTL 2750, or EDTL 2760. MCE majors must have EDTL 2020 and MATH 2150. In addition, MCE majors must have EDTL 2760 or 4502, if applicable to their specialization area. Extra Fee.

EDTL 3421 Literature in the Middle Childhood Content Classroom (3). Fall, Spring, Summer. The study of literature appropriate for subject-area classrooms other than language arts. Topics include motivation and reader response theories, fiction/nonfiction literature across genres, interdisciplinary connections, integrating & responding to content area literature, and assessing student learning. Prerequisite: Junior status, EDTL 2420, EDFI 3030. Must be completed prior to methods block. Not open to students with language arts concentrations.


EDTL 3510 Social Studies Methods for the Intermediate Grades (3). 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 3950 Workshop on Current Topics (1-9). 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 4000 Service Learning (1). Service learning links community service with academic study. Students learn through active participation in thoughtfully organized service. May be repeated. Graded S/U.
EDTL 4160 Applied Action Research in Schools (1). Fall, Spring. Implementing an action research project in schools. This course will require students to collect data in schools, analyze results and prepare a final project report. Prerequisite: EDHD 3160 or approval of instructor. Extra Fee.

EDTL 4180 Practicum in School Settings (3). Fall. 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 Early Childhood, Middle Childhood, World Language or Adolescent/Young Adult Methods Blocks. S/U only. Transportation required.

EDTL 4200 Developmental Reading in the Content Areas (3). Fall. Orient the teacher to the developmental reading process as it applies to the various subject areas in the middle grades and above. Prerequisites: Attainment of 60 semester hours, accumulative GPA of at least 2.8, grade of C or better in EDHD 210, EDFI 3020 or 3030.

EDTL 4210 Content Area Literacy (3). Fall, Spring. Orient the 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 4290 Teaching Foreign Language Skills in the Schools (3). 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. Credit cannot be earned in both this course and EDTL 5290. C/F hrs.: 40. Transportation required.

EDTL 4430 Applied Literacy Assessment for Adolescent Readers (3). Fall. Applying literacy techniques to adolescent readers in middle childhood and secondary classrooms and educational settings. From theoretical perspectives to materials, techniques, and tools. Using assessments to plan instruction. Transportation required. Must obtain a minimum grade of C prior to EDTL 4920 or 4970. Prerequisite or Corequisite: EDTL 4200 or EDTL 4710.

EDTL 4460 Investigations in Mathematics for the Middle Childhood Teacher (3). Fall. 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 4470 Literacy for Middle Childhood Educators (3). Fall. In-depth study of literacy for reading-language arts teachers in middle grades, including curriculum, materials, methodologies, assessment tools, and interventions. 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 4480 Science Methods for the Middle Childhood Teacher (3). Fall. 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 4490 Social Studies for the Middle Childhood Teacher (3). Fall. 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. Transportation required. Extra fee.

EDTL 4500 Teaching Ohio and the Americas: Content and Methods for the Intermediate Social Studies Classroom (3). Spring, Summer. An in-depth study of social studies instruction for teaching grades 4-6, including curriculum, materials, methodologies, assessment tools and interventions. Prerequisites: Completion of BGSU Field Block II (K-3 Practicum) or Middle Childhood Methods block with a C/P or higher in all courses, or an ECE Ohio Provisional License, or an Ohio Middle Childhood teaching license. Approved for distance education.

EDTL 4501 Upper Elementary Math Instruction (3). Summer. A systematic examination of trends and issues affecting a contemporary program of elementary school mathematics. Attention is focused on methods, objectives, and materials as applied to individualized diagnostic and prescriptive instruction. Prerequisites: Completion of BGSU Field Block II (K-3 Practicum) with a C/P or higher in all courses or an ECE Provisional License in Ohio. Approved for Distance Education.

EDTL 4502 Upper Elementary Science Instruction (3). Fall, Spring, Summer. A systemic examination of trends and issues affecting a contemporary program of elementary school science. Attention is focused on methods, objectives and materials as applied to individualized diagnostic and prescriptive instruction. Prerequisite: Completion of BGSU Field Block II (K-3 Practicum) or the Middle Childhood Methods Block with a C/P or higher in all courses, or an ECE Provisional or Middle Childhood teaching license. Approved for distance education.

EDTL 4503 Upper Elementary Language Arts Instruction (3). Summer. An in-depth study of reading-language arts for teaching in the 4th and 5th grades, including curriculum, materials, methodologies,
assessment tools and interventions. Prerequisites: Completion of BGSU Field Block II (K-3 Practicum) with a C/P or higher in all courses or an ECE Provisional License in Ohio. Approved for Distance Education.

EDTL 4670 Computer Utilization in the Classroom (3). Fall. 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 Language Arts in Secondary Schools (3). Fall. Philosophies of, experiences in and methods of teaching English in secondary schools. Prerequisites: admission into the adolescent/young adult education methods block. ENG 3800 and ENG 3810. Grade of C or better required. C/F hrs.: 40. Transportation required. Extra fee.


EDTL 4800 Professional Skills for the Early Childhood Educator (3). 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. Extra fee.

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

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

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

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

EDTL 4900 Problems in Education (1-3). 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 Early Childhood Teaching Internship (1-16). 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 Middle Childhood Teaching Internship (1-16). 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 Student Teaching Seminar for Middle Childhood Educators (3). 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  Teaching Internship (1-16). 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.

EDWF - Workforce Education and Development

EDWF 2000  Introduction to Workforce Education and Development (3). Introduction to teaching and learning through workforce education and development programs such as business and marketing, family and consumer sciences, and technology in public and private schools, post-secondary institutions, and private business and industry. C/F hours: 30. Transportation required. Approved for distance education.

EDWF 2400  Business Problems of the Consumer (3). 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. Approved for distance education.

EDWF 2620  Advanced Productivity Software (3). Advanced office productivity applications including such functions as word processing, spreadsheet, and database. Prerequisite: CS 1000 or MIS 2000. Approved for distance education.

EDWF 3160  Internship in Workforce Education and Development (1-4). Supervised work experience in workforce education and development career fields. Written assignments also required. May be repeated up to four hours. Graded S/U. Transportation required. Approved for distance education.


EDWF 4110  Field Experiences in Workforce Education and Development (1-12). Experiences provided in a workforce education and development setting, paid or unpaid, that include supervision and/or mentoring by the University. Setting approved by instructor. Assignments also required. Approved for distance education.

EDWF 4170  Teaching and Learning in Workforce Education and Development (3). The teaching and learning process as it relates to workforce education and development including curriculum, instruction, integration of academics, assessment, and student organizations. Prerequisites: Completion of all methods admission requirements including minimum overall GPA of 2.7. Take concurrently with other methods block courses. Transportation required. Approved for distance education.

EDWF 4670  Teaching and Learning in Workforce Education and Development (3). Managing and facilitating workforce education and development programs and managing work-based instructional and assessment strategies while connecting them to school-based instruction. Prerequisites: Completion of all methods admission requirements including minimum overall GPA of 2.7. Take concurrently with other methods block courses. C/F hours: 8. Transportation required. Approved for distance education.

EDWF 4700  Studies in Workforce Education and Development (1-15). 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. Approved for distance education.

EDWF 4770  Workforce Education and Development Practicum (1-4). Field experience in local schools to familiarize students with teaching responsibilities, including planning, instruction, assessment, and classroom management, as well as school administration and policies, teacher duties, and student organizations. Prerequisites: Completion of all methods admission requirements including minimum overall GPA of 2.7. Take concurrently with other methods block courses. Transportation required. Approved for distance education.

EDWF 4860  Workshop in Workforce Education and Development (1-3). Areas of current interest to educators in workforce education and development. May be repeated. Approved for distance education.

EDWF 4960  Advanced Seminar in Workforce Education and Development (3). A forum for discussing and reflecting on the student teaching internship. Topics include advanced lesson planning, instruction, and assessment; the edTPA; effect on student learning; classroom management; and transitioning to a professional career. Co-requisite: EDTL 4970. Transportation required. Approved for distance education.

EIEC - Education Inclusive Early Childhood

EIEC 1110  Continuum of Early Childhood Development (3). Fall, Spring. Focuses on the broad continuum of cognitive, social,
emotional and physical development of children emphasizing conception through grade 3. Examines children growing up in diverse families, communities, and cultural contexts through various observational techniques, application of developmental theory, and instruction in research methodology.

**EIEC 2100 Inclusive Perspectives on Early Childhood Education (1).** Fall, Spring. Introduction to inclusive practices. Includes field experience observing and assisting in inclusive early childhood settings across developmental levels, including services & education for infants & toddlers, preschoolers, and children in kindergarten - grade 3. Must be taken at BGSU. Taken with EIEC 2110, 2120 & EDFI 3010. Prerequisites: Grades of C or higher in EDTL 2010 & EIEC 1110.

**EIEC 2110 Introduction to Young Children with Exceptional Needs (3).** Fall, Spring. Legislation and the foundations of early childhood special education/early intervention, including children who are gifted and talented. Focuses on etiology, characteristics, classifications, and implications of exceptional learning and developmental needs in young children. Course content also includes evaluation team reports, eligibility for services and supports, service delivery models, family engagement, and individualized education/intervention plans. Taken with EIEC 2100, 2120, 2150, & EDFI 3010. Prerequisites: Grades of C or higher in EDTL 2010 & EDFI 3010.

**EIEC 2120 Foundation of Inclusive Early Childhood Education (2).** Fall, Spring. Examines the foundations of early childhood and early childhood special education. Emphasizes the diversity of today's schools with respect to ability, language, culture, and ethnicity. Explores historical, legislative, social and philosophical foundations of early childhood and early childhood special education. Introduces professional standards: NAEYC Developmentally Appropriate Practice and CEC/DEC Recommended Practices Taken with EIEC 2100, 2110, 2150, & EDFI 3010. Prerequisites: Grades of C or higher in EDTL 2010 & EIEC 1110.

**EIEC 2140 Communication Development in Young Children (3).** Fall, Spring. Examines general theories of language and communication development and intervention approaches; including bilingualism, didactic and child-directed approaches, caregiver-child interactions and naturalistic environments, and influences of preschool inclusion. Introduces specific strategies for assessment of communicative functioning. Focuses on early intervention as the key to communication development in children who are not progressing at normal developmental rates. Discusses alternative and augmentative devices in natural settings and guidelines for training parents and peers.

**EIEC 2150 Creative and Expressive Arts and Movement for Inclusive Early Childhood (3).** Fall, Spring. Understanding and integrating the visual arts, physical education, and music education in teaching and learning with all young children. Course offers skills and experiences needed for using music, physical education /movement, drama and the visual arts in the inclusive early childhood curriculum. Explores the potential of the arts and movement in diverse and inclusive early childhood settings. Taken with EIEC 2100, 2110, 2120, EDFI 3010. Prerequisites: Grades of C or higher in EDTL 2010 & EIEC 1110.

**EIEC 2210 Cultural and Linguistic Diversity in Early Childhood Education (3).** Fall, Spring. Focus on theories, issues, trends, skills and strategies to prepare teacher candidates for working in educational settings with children and families from diverse cultural and linguistic backgrounds to support educational involvement and achievement. Taken with EIEC 2220, 2230, & 2240. Prerequisite: C or higher in EDTL 2010 & EIEC 1110.

**EIEC 2220 Working with Families of Young Children (3).** Fall, Spring. Theory and practice as a foundation for understanding family dynamics, parenting, and diversity. Development and maintenance of respectful, reciprocal relationships between family, school, and community to promote the optimum development of every child. Focuses on communication skills and dispositions necessary to effectively collaborate with families, paraprofessionals, teachers, and other professionals. Strategies to engage diverse families in the development and education of their children. Taken with EIEC 2210, 2230, & 2240. Prerequisites: Grades of C or higher in EDTL 2010 & EIEC 1110.

**EIEC 2230 Infants & Toddlers in Natural Environments (3).** Fall, Spring. Offers didactic content and fieldwork that focuses on infants and toddlers with disabilities or at-risk conditions and their families. Provides candidates with supervised fieldwork experience in team-oriented interventions with infants and toddlers with disabilities or at risk for developmental delays and their families. Taken with EIEC 2210, 2220, & 2240. Prerequisites: Grades of C or higher in EDTL 2010 and EIEC 1110.

**EIEC 2240 Curricula for Infant and Toddler Early Care and Education (3).** Fall, Spring. Provides practical and effective tools emphasizing positive attention, approval, and affection for the care and development of infants and toddlers. Reviews current trends in care and theories of infant and toddler development and provides a structure and model of caregiving that enhances development in each major developmental area. Examines the process of curriculum development and implementation. Taken with EIEC 2210, 2220, & 2230. Prerequisites: Grades of C or higher in EDTL 2010 and EIEC 1110.

**EIEC 3100 Inclusive Pre-Kindergarten Field Experience (2).** Fall. Intensive field experiences working with young children and their families in inclusive pre-kindergarten settings. Focuses on the implementation of the Individualized Family Service Plan (IFSP) and Individualized Educational Plans (IEP). Experiences planning and
teaching to meet the needs of all young children through developmentally and individually appropriate curricula, instruction, intentional learning experiences, and adaptations. Transportation required. Taken with EIEC 3110, 3120, 3130, 3140, & 3150. Prerequisite: Admission into Advanced Study in Inclusive Early Childhood.

EIEC 3110 Intentional Teaching for Young Children (3). Fall. Introduces curriculum for preschool children that focuses on the whole child. Examines Developmentally Appropriate Practices (DAP) for all young children and recommended practices for early intervention/early childhood special education. Discusses a variety of curriculum models and what features may be most effective for particular outcomes and conditions. Focuses on lesson plan and curriculum unit development using ODE Early Learning Content Standards. Taken with EIEC 3100, 3120, 3130, 3140 & 3150. Prerequisite: Admission into Advanced Study in Inclusive Early Childhood.

EIEC 3120 Phonics in Inclusive Early Childhood Classrooms (3). Fall. Phonics and a systematic approach to its teaching, assessment, and intervention for teaching, reading, and writing to all young children. From phonemic awareness to phonics to fluency with research-based approaches. Addresses structural analysis, sight vocabulary and context, and word study in relation to meaningful reading and writing tasks. Considers the impact of language development and diversity on skill acquisition. Must be taken at BGSU with EIEC 3100, 3110, 3130, 3140 & 3150. Prerequisites: Admission to Advanced Study in Inclusive Early Childhood.

EIEC 3130 Emergent and Beginning Reading in Inclusive Early Childhood (3). Fall. Approaches to support the development of emerging reading, writing, and language skills for all young children. Informal assessments, classroom environments, developmentally appropriate teaching for pre-K through third grade. Theoretical perspectives and differentiated instruction regarding print awareness, motivation, oral language development, and comprehension of fictional text. Taken with EIEC 3100, 3110, 3120, 3140 & 3150. Prerequisites: Admission to Advanced Studies in Inclusive Early Childhood.

EIEC 3140 Introduction to Assessment in Inclusive Early Childhood Settings (3). Fall. Mastery of basic assessment knowledge pertaining to young children, including psychometric principles, diagnostic and prescriptive teaching will support students learning principles central to planning, administering, scoring, and interpreting traditional and performance-based assessments. Administer and interpret scores for data-based decision making. Guidelines and criteria for conducting multidisciplinary evaluation and diagnosing of young children with disabilities. Taken with EIEC 3100, 3110, 3120, & 3150. Prerequisites: Admission to Advanced Studies in IEC.

EIEC 3150 Instructional and Assistive Technology (3). Fall. Develops content and methods for teaching young children using technologies. Focuses on software evaluation, technology for early childhood program administration, assessment supported by technology, and the integration of technology in the classroom. Considers current issues and policies on young children and technology. Focuses on integration of assistive technology into IFSPs/IEPs, lesson plans, activities, and daily routines. Taken with EIEC 3100, 3110, 3120, 3130, & 3140. Prerequisites: Admission to Advanced Studies in Inclusive Early Childhood.

EIEC 3300 Kindergarten - Grade 3 Practicum in Inclusive Classrooms (2). Fall. Intensive field experience working in an inclusive classroom, from kindergarten to grade 3. Involved teaching and collaboration with the general classroom teacher and the intervention specialist. Includes some on-campus sessions to prepare students for effective teaching and management to meet the needs of every child in the classroom.

Transportation required. Must be taken at BGSU with EIEC 3310, 3320, 3330, 3340 & 3350. Prerequisites: Admission to Advanced Study in Inclusive Early Childhood.

EIEC 3310 Reading and Writing Methods for Inclusive Early Childhood Classrooms (3). Fall. Approaches for developing literacy skills for all young children in PK-3 classrooms. Addresses reading, writing, speaking, listening, viewing, and researching across the curriculum. Research-based strategies and effective resources for differentiated instruction based on standards and with a focus on literature, motivation, and meaningful experiences comprehending and constructing texts. Must be taken with EIEC 3300, 3320, 3330, 3340 & 3350. Prerequisite: Admission to Advanced Study in Inclusive Early Childhood.

EIEC 3320 Math Methods for Inclusive Early Childhood Classrooms (3). Fall. Approaches to developing mathematical competencies in all young children, birth-grade 3. Addresses mathematical inquiry and problem-solving experiences, informal and formal explorations, research-based approaches to teaching, and teaching tools including the use of technology and manipulatives. Emphasizes standards-based content and various assessments as the basis for effective teaching and differentiation to meet the needs of all children. Must be taken at BGSU with EIEC 3300, 3310, 3330, 3340 & 3350. Prerequisite: Admission to Advanced Study in Inclusive Early Childhood.

EIEC 3330 Social Studies Methods for Inclusive Early Childhood Classrooms (3). Fall. Strategies for an active approach to teaching social studies to all young children in pre-kindergarten to grade three classrooms. Addresses standards-based content, inquiry, cooperative learning skills, teaching and learning resources, and effective teaching practices. Emphasizes language and technologies as critical learning tools for helping all young children develop the knowledge and skills needed for full participation in our global and
EIEC 3340 Science Methods for Inclusive Early Childhood Classrooms (3). Fall. Approaches to teaching science to all young children, pre-kindergarten-grade 3. Addresses "hands-on", research-based instruction in science. Focuses on exploration, inquiry, and investigation through informal and formal learning experiences, with effective resources including technology. Emphasizes standards-based content and informal assessments as the basis for effective teaching and differentiation to meet the needs of all children. Must be taken at BGSU with EIEC 3300, 3310, 3320, 3330 & 3350. Prerequisite: Admission to Advanced Study in Inclusive Early Childhood.

EIEC 3350 Adapting and Accommodating Instruction in Inclusive Early Childhood Classrooms (3). Fall. Considers that every child is different and requires varied teaching methods to be successful. Focuses on the knowledge and skills of differentiating education by adapting curriculum, instruction, and materials, as well as arranging the physical, social, and instructional environments to enhance development and learning. Discusses strategies for the inclusion of young children with disabilities (birth through age eight). Must be taken at BGSU with EIEC 3300, 3310, 3320, 3330 & 3340. Prerequisite: Admission to Advanced Study in Inclusive Early Childhood.

EIEC 4110 Positive Behavior Supports for Young Children (3). Examination of strategies designed to support the developmental competencies of young children. Focuses upon the analysis of individual children's behavioral development and classroom management strategies to support children's prosocial participation in classroom environments. Strategies to provide differentiated learning environments are explored. Taken with EIEC 4120, 4800, & 4810. Prerequisite: Admission to Advanced Study in Inclusive Early Childhood. S grade in EIEC 3100 and grades of C or higher in EIEC 3110, 3120, 3130, 3140, & 3150.

EIEC 4120 Advanced Assessment for Program Planning in Inclusive Early Childhood (3). Spring. Examines systematic assessment procedures to determine eligibility for services and to monitor the healthy growth and development of children, 0-grade 3, with(out) disabilities. Focuses on collaboration with related services personnel and families, writing reports, and using data to plan instruction and activities. Provides experience in Response to Intervention (RTI), Individualized Family Service Plan (IFSP), Individualized Education Program (IEP), and a 504 Plan. Taken with EIEC 4110, 4800 & 4810. Prerequisites: Admission to IEC Advanced Study.

EIEC 4210 Literacy Assessment for Instruction in Inclusive Early Childhood Classrooms (3). Spring. Assessing reading and writing development as the basis for instructional decision-making to teach all young children. Formal and informal literacy assessment tools appropriate for beginning and developing readers. Considers communicating and collaborating with families, teachers, and other professional to support literacy skill development. Must be taken at BGSU with EIEC 4220, 4900, & 4910. Prerequisite: S grade in EIEC 3300 and grades of C or higher in EIEC 3310, 3320, 3330, 3340 & 3350.

EIEC 4220 Consultation/Collaboration and Transition (3). Spring. Professional teaming and collaboration in service planning and delivery to young children with exceptional needs. Considers teaming models, cooperative and co-teaching models, and both home-based and classroom-based consultation strategies. Addresses transition theory and planning. Taken with EIEC 4210, 4900 & 4910. Prerequisites: Admission to Advanced Study in IEC. S grade in EIEC 3300 and grades of C or higher in EIEC 3310, 3320, 3330, 3340 & 3350.

EIEC 4800 Inclusive Early Childhood Student Teaching: Pre-Kindergarten (8). Spring. Internship in an inclusive pre-kindergarten classroom, with supervised experiences as a general classroom teacher and an intervention specialist. Teacher candidates apply their knowledge and skills to demonstrate effective teaching. Full-day experience following the calendar and hours of assigned school. Transportation required. Must be taken with EIEC 4110, 4120 & 4810. C/F hours: 40 hours per week. Prerequisite: S grade in EIEC 3100 and grades of C or higher in EIEC 3110, 3120, 3130, 3140 & 3150.

EIEC 4801 Inclusive Early Childhood Student Teaching: Pre-K (4). Spring. Internship in an inclusive pre-kindergarten classroom. Teacher candidates apply their knowledge and skills to demonstrate effective teaching. Ten week half-day experience following the calendar and hours of assigned school. Transportation required. Must be taken with EIEC 4110, 4120 & 4810. C/F hours: 20 hours per week. Prerequisites: Grade of S in EIEC 3100 and grade of C or higher in EIEC 3110, 3120, 3130, 3140, & 3150. Graded S/U.

EIEC 4810 Pre-Kindergarten Student Teaching Seminar (1). Spring. Professional course to support reflectivity and develop the emerging skills of student teachers in Pre-Kindergarten field placements. Must be taken with EIEC 4800, 4110 & 4120. Prerequisites: S grade in EIEC 3100 and grades of C or higher in EIEC 3110, 3120, 3130 & 3150.

EIEC 4900 Inclusive Early Childhood Student Teaching Internship: Kindergarten to Grade 3 (10). Spring. Internship in an inclusive kindergarten-grade 3 classroom, with supervised experiences as a general classroom teacher and an intervention specialist. Full-day experience following the calendar and hours of assigned school. Transportation required. Must be taken with EIEC 4910, 4210 & 4220. C/F hours: 40 hours per week. Prerequisites: Admission into Advanced Study in
Inclusive Early Childhood. S grade in EIEC 3300 and grades of C or higher in EIEC 3310, 3320, 3330, 3340 & 3350. Graded S/U. Extra Fee.

EIEC 4910 Kindergarten-Grade 3 Student Teaching Seminar (1). Spring. Professional course to support reflectivity and develop the emerging skills of student teachers in kindergarten-grade 3 field placements. Must be taken with EIEC 4900, 4210 & 4220. Prerequisites: Admission into Advanced Study in Inclusive Early Childhood. S grade in EIEC 3100 and grades of C or higher in EIEC 3110, 3120, 3130, & 3150.

ENG - English

ENG 99 Creative Writing Common Time (0). 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 1500 Response to Literature (3). 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. Approved for Distance Education.

ENG 2000 Writing about Literature (2-3). 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 2110 Introduction to Literature (3). Fall, Spring, Summer.

ENG 2040 Imaginative Writing (3). 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.

ENG 2050 Craft of Poetry (3). 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 Craft of Fiction (3). 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 Intermediate Writing (3). Fall, Spring. 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. Approved for distance education.

ENG 2090 Creative Writing Workshop (3). Fall, Spring. Principles of poetic composition and fiction writing; analysis of contemporary models and group discussion of student’s work. May be repeated once.

ENG 2100 African-American Literature (3). Spring. African-American literature from the mid-eighteenth century to the present in its historical, political, and cultural context. Germanic critical approaches to both literary modes and vernacular tradition. Applicable to the BG Perspective (general education) cultural diversity in the United States requirement. Approved for distance education.

ENG 2120 Native American Literature (3). Fall. Native American literature from the oral to the written tradition in its historical and cultural context. Germanic 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 World Literature from Ancient Times to 1700 (3). 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 World Literature from 1700 to Present (3). 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 British Literature Survey to 1660 (3). 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  British Literature Survey, 1660-1945 (3). 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  Canadian Fiction (3). 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  Survey of American Literature to 1865 (3). 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  Survey of American Literature, 1865-1945 (3). 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  Writing About Films (3). Fall, Spring. Writing-intensive course treating film analysis, film reviews, film theory, and film adaptations. Prerequisite: GSW 1120.

ENG 2900  Language Study (3). 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  Interdisciplinary Studies in Literature (3). 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  Shakespeare (3). Fall, Spring. Representative comedies, histories, tragedies, romances, and lyric poetry. Appropriate for students with no previous Shakespeare courses. Prerequisite: ENG 2010.

ENG 3020  Introduction to Literary Theory and Criticism (3). 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  The Bible (3). Fall, Spring, Summer. The Bible as a literary classic; its development and influence on literary culture. Prerequisite: GSW 1120.

ENG 3100  Multiethnic American Literature (3). Alternates with ENG 3110 and ENG 3140 in Fall, Spring, Summer. Modern and contemporary literatures by visibly ethnic American writers. Themes, literary genres, and germinal critical approaches in a focus on intersections between cultures and texts. Prerequisites: ENG 3020 or ENG 2020.

ENG 3110  Gay and Lesbian Literature and Criticism (3). 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  Poetry Workshop (3). 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.

ENG 3130  Fiction Workshop (3). 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.

ENG 3140  Postcolonial Literature (3). 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  Modern Poetry (3). 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  Modern Fiction (3). 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.
ENG 3250  Modern Drama (3). 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  Contemporary Poetry (3). 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  Contemporary Fiction (3). 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  Contemporary Drama (3). Spring. Dramatic works by British, European (in translation), and American writers of the contemporary period (since 1945) such as Arden, Friel, Stoppard, Devere 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  Literature for Young Children (3). 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  Literature for the Middle Child (3). Fall, Spring, Summer. 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  Literature for Adolescents (3). Fall, Spring. Reading and evaluation of books for 7th - 12th grade; fiction, non-fiction, poetry, and bibliographic sources. Prerequisite: GSW 1120. Priority given to middle and EDIS majors. Does not count for Arts and Humanities literature requirement.

ENG 3800  Linguistics for English Teachers (3). 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  Grammar and Writing (3). Fall, Spring. Application of grammatical models (traditional, structural and transformational) to the teaching of writing.

ENG 3850  Studies in Literature-Film (3). 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. Laboratory hours required. Prerequisite: GSW 1120.

ENG 3870  Literary Editing and Publishing (3). 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  Introductory Technical Writing (3). 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. Approved for distance education.

ENG 3890  Professional Editing (3). 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. Approved for distance education.

ENG 4000  Chaucer (3-4). 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  Special Topics in Shakespeare and Criticism (3-4). On demand. In-depth analysis of Shakespeare’s poetic and dramatic production from specific critical/theoretical perspectives. Prerequisite: ENG 3010.

ENG 4020  English Medieval Literature (3-4). 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  16th and 17th Century Non-Dramatic Literature (3-4). 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 English Renaissance Drama (3-4). 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 4100 Topics in English Restoration Literature and Culture (3-4). On demand. English prose, poetry, and drama 1660-1710. Representative writers--Wycherley, Behn, Dryden, Congreve, Astell--in their neo-classical, historical, and continental contexts. Prerequisite: ENG 2010.

ENG 4120 Poet's Workshop (3). Fall, Spring. Focuses on developing the students' writing process and understanding of contemporary poetry. Creative writing majors taking their second 400-level workshop class must complete a thesis and public reading. Prerequisite: B or better in ENG 3120 or 3130 or instructor permission. May be repeated once.

ENG 4130 Fiction Writer's Workshop (3). Fall, Spring. Focuses on developing the students' writing process and understanding of contemporary fiction. Creative writing majors taking their second 400-level workshop class must complete a thesis and public reading. Prerequisite: B or better in ENG 3130 or ENG 3120 or instructor permission. May be repeated once.

ENG 4150 Topics in 18th-Century British Literature and Culture (3-4). 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 The Victorian Novel (3-4). On demand. Male and female novelists of the Victorian period (1837-1901), including the Brontes, 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 Topics in British Romanticism (3-4). 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 Victorian Poetry and Prose (3-4). 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 Topics in Modern British Literature (3-4). On demand. Works in one or more genres from the modern period 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 Women's Studies in Literature (3-4). 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 Topics in Multiethnic American Literature (3-4). 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.

ENG 4300 Topics in Early American Literature (3-4). 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 Topics in the American Renaissance (3-4). 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 Topics in Late 19th-Century and Early 20th-Century American Literature (3-4). 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 Topics in Modern American Literature (3-4). On
demand. Intensive study of an author, group of authors, genre, theme, period, or critical issue. Authors may include: Eliot, Stein, Hurston, Hemingway, Faulkner, Odetts, Barnes, Wharton, Stevens, H.D., and Hughes. Prerequisite: ENG 2010.

ENG 4340 Topics in Contemporary American Literature (3-4). On demand. Intensive study of an author, group of authors, genre, theme, period, or critical issue. Prerequisite: ENG 2010.

ENG 4420 Studies in Children's Literature (3). Alternate years. Problems in children's literature; history, criticism, trends, individual authors, types. Prerequisite: ENG 3420 or permission of instructor.

ENG 4560 Topics in Critical Theory (3-4). On demand. In-depth study of one or more literary/critical theories such as semiotic, psychoanalytic, Marxist, feminist, postcolonial. Prerequisite: ENG 3020.

ENG 4700 Directed Readings in Language and Literature (1-4). 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 Topics in English Studies (3-4). 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 Advanced Composition (3). 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. Approved for distance education.

ENG 4840 Foundations of Teaching Writing (3). 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 Topics in Film Theory (3-4). On demand. In-depth study of one or more film theories such as semiotic, psychoanalytic, genre, feminist. Laboratory hours required. Prerequisite: ENG 2010.

ENG 4860 Writing Process for Online Documents (3). Fall. Emphasis on theory, principles, and research about the writing process involved for online documents. Prerequisite: ENG 3880 or permission of instructor.

ENG 4870 Science and Medical Writing (3). 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 Advanced Technical Writing (3). Spring. Advanced study of theory and research in documentation. Student produces a substantial portfolio-quality project. Prerequisite: ENG 3880 or permission of instructor.

ENG 4890 Internships in English Studies (1-9). 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 Workshop (1-3). 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 Senior BFA Thesis Workshop (3). 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 Senior Project Tutorial (3). Fall, Spring. Student selects faculty member to guide work on topics such as major author, theme, period, genre or linguistics. Research and writing to produce a scholarly essay of approximately 25 pages. Prerequisite: 20 hours of English beyond GSW 1120. Credit may not be received for both ENG 4980 and ENG 4990.

ENG 4990 Senior Project Thesis (3). Fall, Spring, Summer. 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.

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ENG - Engineering Technology

ENG 1010 Design and Engineering Graphics I (3). On demand. 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.

ENG 1020 Introduction to Engineering Technology (3). On demand. 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 Basic Computer-Aided Design (3).** Fall, Spring. Introduction to CAD-based application. Construction of two-dimensional engineering drawings using a CAD system, with an emphasis on 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.

**ENGT 1940Q Inquiry in Science and Technology (3).** Inquiry into sustainable technologies, and their effects on society, individuals and the World. This will be achieved through examining the technologies found in green buildings, water reclamation, transportation technologies, renewable/cleaner fuels, and technologies of green design and manufacture. Prerequisite: Open only to Freshman students.

**ENGT 2100 Solid Modeling (3).** 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.

**ENGT 2150 Descriptive Geometry & Production Drawing (3).** 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 Metallic Materials and Processes (3).** Fall and on demand. A survey of metals and their hot and cold processing practices. Laboratory applications and techniques are studied. Four hours of lecture and laboratory per week. Extra fee.

**ENGT 2250 Machine Design (3).** Spring. Machine design principles applied to the design of components, assemblies, machines, and production systems. Selection and application of standard mechanical components. Two one and one half-hour lectures per week. Prerequisite: ENGT 2200.

**ENGT 2300 Fluid Power Transmission (3).** 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: ENGT 2200. Extra fee.

**ENGT 2400 Statics and Strength of Materials (3).** Fall, Spring. Fundamentals of statics including vectors, centroids, free body diagrams and structural systems. Two two-hour lecture/tutorials per week. Prerequisite: MATH 1280 or MATH 1300 or MATH 1310 or MATH 1340 and MATH 1350 or permission of instructor.

**ENGT 2500 Computer Numerical Control (CNC) Programming and Machining (3).** 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.

**ENGT 3050 Technical Illustration (3).** 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.

**ENGT 3200 CAM & Rapid Prototyping (3).** 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 3250 Sustainable Technologies (3).** Spring and on demand. Carbon emission control regulations as they apply to industry. Functioning and selection of consumer products and Industrial processes based on sustainable technologies and selected case studies. Three one hour lectures per week.

**ENGT 3400 Properties and Testing of Engineering Materials (3).** 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 Plastics and Composite Materials and Processes (3).** 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 Metrology and GD & T (3).** Spring and on Demand. Focus on contemporary metrology instrumentation, practice with an emphasis on geometric dimensioning and tolerancing. Four hours of lecture and lab. Prerequisites: ENGT 2100, ENGT 2200. Extra fee.

**ENGT 4000 Advanced Modeling, Simulation and Analysis (3).** 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 2100. Extra fee.
ENGT 4280 Automation and Flexible Manufacturing Systems (3). On demand. 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: ENGT 2200 and ENGT 2500. May be repeated. Extra fee.

ENGT 4500 Design Methodologies (3). Spring and on demand. Systems approach applied to solution of 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 4800 Topics in Engineering Technology (1-3). Current trends and developments in engineering technology as they have significance to equipment, materials, and processes as they relate to practicing engineering technologists. May be repeated on approval of an adviser.

ENGT 4900 Problems in Engineering Technology (1-5). For advanced students wanting to conduct intensive study of selected problems in engineering technology. May be repeated. Prerequisite: senior standing and consent of department. Graded S/U.

ENVH - Environmental Health

ENVH 1050 Environmental Health Science (3). 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.

ENVH 2100 The Global Commons: International Perspectives on Environmental Health and Protection (3). 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.

ENVH 3020 Industrial Hygiene (3). Basic concepts in recognition, evaluation and control of workplace hazards including chemical, physical and biologic stressors. Three hours lecture. Prerequisite: CHEM 1250.

ENVH 3030 Industrial Hygiene Laboratory (1). Evaluation methods for chemical, noise, radiation and physical hazards in the workplace and environment. Three hours weekly. Corequisite: ENVH 3020. Major restricted or instructor's consent.

ENVH 3040 Air Quality Management (3). Principles of air quality; pollution sources, effects and control strategies. Three hours lecture. Prerequisite: CHEM 1250.

ENVH 3050 Air Quality Laboratory (1). Sampling and analysis methods in air quality control. Three hours weekly. Corequisite: ENVH 3040. Major restricted or instructor's consent.


ENVH 3070 Occupational Safety (3). Workplace safety principles including regulations, program development and program implementation. Approved for Distance Education.

ENVH 3080 Industrial Ventilation (3). 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 Environmental Assessment Methods I (3). 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 1090 or CHEM 1250.

ENVH 3100 Environmental Assessment Methods II (3). 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 4030 Water Quality Laboratory (1). Laboratory practices in water quality. Three hours weekly. Corequisite: ENVH 4020. Major restricted or instructor's consent.


ENVH 4070 Environmental Toxicology (3). Measurement, effects and mechanisms of toxicity on human
ENVS 1940Q Changing Environment, Changing World (3). Exploration of the complex systems and interactions of the environment. Emphasis on the impacts and changes caused by human activities and the role of sustainable development in the health of ecosystems and human populations. Prerequisite: Open only to Freshman and Sophomore students.

ENVS 2020 Environmental Perspectives (3). 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 Environments in Context (3). 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 requirement. Extra fee.

ENVS 3030 Energy and Sustainability (3). Study of energy production, availability and use focusing on economics, equity, and other elements of the social sciences. Tools for assessing sustainability and acceptability of energy options, including consideration of societal drivers for change.

ENVS 3340 Natural Area Interpretation (3). 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 4940Q Environmental Health Practices (3). Fall, Spring, Summer. Field/lab per week. Techniques include hydrology and water analysis; field sampling of aquatic and terrestrial plants, animals, and microbes; 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 4970 Special Problems in Environmental Health (1-4). Student designs and carries out study or special project in area of interest. Prerequisite: consent of instructor. May be repeated.

ENVR - Environmental Technology

ENVR 4210 Industrial Pollution Control (3). 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.

ENVS - Studies

ENVS 1010 Introduction to Environmental Studies (3). 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 4010 Environmental Policy Majors. Prerequisites: Two courses from BIOL 1010, BIOL 1040, BIOL 2040, BIOL 2050; CHEM 1090 and CHEM 1100, CHEM 1250; GEOL 1010, GEOL 1040; GEOG 1250. Extra fee.

ENVS 4160 Environmental Education (3). 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 Environmental Planning (3). 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 Environmental Justice (3). 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 Readings/Research in Environmental Studies (1-3). 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 Internship (1-3). 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 Field Experience (1-6). 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 Workshop in Environmental Science or Policy (1-6). 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.

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ENVT - Environmental Health Technology

ENVT 2700 Occupational Safety and Hygiene (3). Occupational considerations, evaluation and control of industrial hazards, personal protective equipment, employee assistance programs, accident prevention and investigation, emergency planning. Three hours lecture.

ENVT 2800 Applied Food Service ServSafe Certification Course (1). Covers the Hazard Analysis Critical Control Point (HACCP) food safety system principles, and the Ohio Food Rules.

ENVT 2900 Experimental Studies in the Environment (1-3). 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 Field Experience (1-3). 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.
ESHP - Entrepreneurship

ESHP 2040 Entrepreneurship: The Introduction (3). 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.

ESHP 3040 Entrepreneurship - The Idea (3). 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: C or better in ESHP 2040, declaration of ESHP minor.

ESHP 3140 Entrepreneurship - The Sell (3). Topics include product, price, promotion, distribution activities, market segmentation, buyer behavior, and market research. Emphasis will be placed on guerrilla marketing-unconventional techniques where financial and research resources are limited. A portion of this course will cover selling the idea to potential investors and partners. Prerequisite: C or better in ESHP 2040.

ESHP 3240 Entrepreneurship - The Pre-Launch (3). This course investigates legal and operational structures for entrepreneurial ventures, explores a variety of financing options, outline strategies for vendor and customer partnerships, and identifies key managerial and human resource challenges that new ventures face. Prerequisite: C or better in ESHP 2040.

ESHP 4040 Entrepreneurship - The Launch (3). 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 ESHP 3140 and ESHP 3240.

ESOL - English as a Second Language

ESOL 1000 Academic Composition I (3). For intermediate-level non-native speakers of English. Students engage in extensive grammar review and develop their ability to identify and correct grammar mistakes in the context of frequent, short writing assignments. Academic vocabulary is also emphasized. Students will be introduced to American norms of academic honesty. For students placed into ESOL 1000, this course is a prerequisite to ESOL 1010 and GSW courses. Admission by placement. Graded S/U.

ESOL 1010 Academic Composition II (3). For upper-intermediate-level non-native speakers of English. Students review and practice grammar concepts in the context of writing short essays. With the goal of becoming independent writers, students learn rhetorical concepts, self-editing strategies and academic vocabulary. Students will also become more familiar with American norms of academic honesty and proper citation practices. Admission by placement or advancement from ESOL 1000. Prerequisites to GSW courses. Graded S/U.

ESOL 1030 Academic Speaking and Listening I (3). For intermediate-level non-native speakers of English. Students focus on building overall fluency, developing presentation skills, improving pronunciation, improving oral grammar, increasing listening skills, and developing academic vocabulary. Admission by placement. For students placed into ESOL 1030, this course is a prerequisite to ESOL 1040. Graded S/U.

ESOL 1040 Academic Speaking and Listening II (3). For upper-intermediate to advanced-level non-native speakers of English. Students focus on building overall fluency, developing presentation skills, improving pronunciation, improving oral grammar, increasing listening skills, and developing academic vocabulary. Admission by placement or advancement from ESOL 1040.

Graded S/U.

ETHN - Ethnic Studies

ETHN 1010 Introduction to Ethnic Studies (3). Spring, Summer, Fall. This gateway course to the field of Ethnic Studies introduces students to interdisciplinary analyses of race and ethnicity in the U.S. It explores the social construction and ideologies of race in colonial conquest, slavery, and immigration, and the intersections of race with other hierarchies such as class, gender, and sexuality. Applicable to the BG Perspective (general education) cultural diversity in the United States requirement. Approved for Distance Education. Students cannot take ETHN 1010 and ETHN 1920 or 1930 on the topic "Introduction to Ethnic Studies."

ETHN 1100 Introduction to Latina/o Studies (3). Fall, Spring. Latina/o experience in the United States: cultures, life experiences, and the limited political, education, socio-economic opportunities of this minority. Applicable to the BG Perspective (general education) cultural diversity in the United States requirement. Students cannot take ETHN 1100 and ETHN 1920 or 1930 on the topic "Introduction to Latina/o Studies."

ETHN 1200 Introduction to African American Studies (3). Fall, Spring, Summer. An introduction to the history of black studies, tracing it from its origins in the social, cultural, and political struggles for human and civil rights to the various intellectual currents which have defined the field as a discipline. It places special emphasis on the United States but also considers key authors, historical figures, and social movements from the black Diaspora. Applicable to the BG Perspective (general education) cultural diversity in the United State
requirement. Students cannot take ETHN 1200 and ETHN 1920 or 1930 on the topic "Introduction to African American Studies."

ETHN 1300 Introduction to Asian American Studies (3). Fall, Spring. 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. Students cannot take ETHN 1300 and ETHN 1920 or 1930 on the topic "Introduction to Asian American Studies."

ETHN 1600 Introduction to Native American Studies (3). Fall, Spring. An interdisciplinary examination of the Native American Diaspora in the context of European discovery and conquest. A general overview and comparative analysis of the diverse native people and cultures of North America, effects of colonialism and U.S. policy on Native American communities, federal Indian law and policy, and cultural negotiation. Applicable to the BG Perspective (general education) cultural diversity in the United States requirement. Students cannot take ETHN 1600 and ETHN 1920 or 1930 on the topic "Introduction to Native American Studies."

ETHN 1920Q Inquiry in Humanities and Creative Arts (3). This course uses humanistic and creative methods to introduce interdisciplinary Ethnic Studies. Modes of inquiry like textual and visual analysis or creative nonfiction engender examinations of race: its social construction in the U.S., its ideologies in slavery, immigration, diaspora, and conquest, and its intersections with class, gender, and sexuality. The course may take a comparative approach or focus on African American, Asian American, Latina/o or Native American Studies. Students cannot take this course and other 1000-level ETHN courses on the same topic. Prerequisite: Open only to Freshman students.

ETHN 1930Q Inquiry in Individuals and Society (3). Spring, Summer, Fall. This course introduces inquiry in the interdisciplinary field of Ethnic Studies, emphasizing the social sciences. It explores the social construction of race in the U.S., ideologies of race in the contexts of slavery, immigration, diaspora, and conquest, and how race intersects with class, gender, and sexuality. This course may take a comparative approach or focus on the topics and methods of African American, Asian American, Latina/o, or Native American Studies. Students cannot take this course and other 1000-level ETHN courses on the same topic. Prerequisite: Open only to Freshman students.

ETHN 2010 Ethnicity and Social Movements (3). Fall or Spring. The nature, causes, and consequences of those social movements born out of the diasporan histories and experiences of racial and ethnic peoples/communities in the United States.

ETHN 2110 History of Mexican Americans (3). 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 African Literature (3). 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 The Native American in Film (3). Fall or Spring. This course explores the cinematic representation of Native American themes and characters from 1950s to the contemporary period, including commercial Hollywood productions and independent film. Particular focus on the relationship between literature, history, and film as well as the relevance of indigenous aesthetics.

ETHN 2600 Contemporary Issues in Native America (3). Fall, Spring. Examines salient issues of interest to contemporary Native American people and communities. Selected topics may include federal Indian law and policy, assimilation, identity politics, Indigenous spirituality, economic development, tribal governance, sovereignty, decolonization and global indigeneity. Applicable to the BG Perspective (general education) cultural diversity in the United States requirement.

ETHN 3000 Topics in Ethnic Studies (3). Fall, Spring, Summer. Special ethnic topics of interest to students provided as a part of regular offering. May be repeated.

ETHN 3010 Ethnicity in the United States (3). 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 Race, Representation, and Culture (3). Fall, Spring, Summer. This course offers a focused examination of racial, ethnic, and gendered representations as they have appeared within the context of popular culture and mainstream media in the United States. It critically investigates the history of a wide range of stereotypes within the context of theatre, film, music, television, and radio, analyzing the social and ideological processes and practices that have given them such widespread currency since the nation's founding.

ETHN 3050 Women of Color in the United States (3). 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 Mexican Culture (3).** 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 Chicanos in the United States (3).** 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 African Cultures and Societies (3).** 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 Literature of Black Nationalism (3).** Spring. Contributions made by African and African American writers to the rise of nationalism.

**ETHN 3300 Race and Labor in the United States (3).** 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 Afro-American Cinematic Experience (3).** 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 African Women (3).** 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 International Perspectives on Women (3).** 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 Native American Women and Indigenous Issues (3).** Spring. Examines the intersections of race and gender within global and national contexts of indigenous societies. Women's lives in indigenous societies are examined in relation to their historical and contemporary realities.

**ETHN 3800 Black Noise: African American and Social Change from Slavery to Hip Hop (3).** Spring. We will consider the power of music as an agent of social change and political resistance for black communities in the United States. We will explore the sounds of jazz, blues, rhythm and blues, gospel, soul, funk, hip hop and spoken word poetry, examining them through the lens of the collective struggles for citizenship, social justice and economic equality that marked the African American experience for over 200 years.

**ETHN 3950 Workshop on Current Topics (1-3).** 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 Colonial Africa (3).** 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 Contemporary Africa (3).** 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 Africa and World Politics (3).** 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 Mexican-American Social Thought (3).** 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 Contemporary U.S. Immigration (3). 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 Latino/a Cultural Studies (3). 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 Discourses of Empire and Nation (3). Fall or Spring. Examines the rhetoric of empire in the shaping of colonial ideologies, policies, and practices; also explores the imaginative and ideological continuities between colonial and postcolonial realities. Applicable to the BG Perspective (general education) humanities and arts and international perspective requirements.

ETHN 4300 National and Global Perspectives on Race and Ethnicity (3). 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 Race and Urban Housing (3). 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 Women and Globalization (3). 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 History of American Racism (3). Fall, Spring. This course surveys the invention of the concept of "race" and its role in the development of America. It examines both the history of "scientific" and popular thinking about race and racial differences as well as how such beliefs influenced the history of the United States.

ETHN 4550 Latina/o Gender and Sexuality (3). Fall, Spring. This seminar will examine constructions of gender and sexuality among U.S. Latina/o populations. We will examine the relationship between hierarchies of race, class, gender, and sexuality. Topics include family, reproductive rights, GLBT cultures. Credit allowed for only one of ETHN 4550/WS 4550.

ETHN 4600 Third World Cinema (3). 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 Readings in Ethnic Studies (1-3). 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 Seminar in Ethnic Studies (3). Fall, Spring, Summer. 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 4890 Field Study in Ethnic Studies (1-3). 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.

FCS - Family & Consumer Sciences

FCS 3890 Supervised Field Experience (1-5). 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 Workshop on Current Topics (1-3). 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 Independent Study (1-3). 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 Seminar in Family and Consumer Sciences (1-3). In-depth examination of topics in family and consumer sciences not covered by
existing coursework. Repeatable once. Undergraduate credit only. Extra Fee.

**FCS 4890 Internship (5-12).** Fall, Spring, Summer. Internship in a professional environment. Work settings are approved on an individual basis. May be repeated. Graded S/U.

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**FIAD - Fire and EMS Administration**

**FIAD 1900 Introductory Special Topics in Technical or Applied Training (1-10).** Training in state- or nationally-certified program related to introductory-level fire science, emergency medicine, or related discipline. Proof of certification required. Applicable for FIAD technical cognate credit only. Variable credit. Repeatable if topics differ. Permission of department required.

**FIAD 2900 Intermediate Special Topics in Technical or Applied Training (3-30).** Training in state- or nationally-certified program related to intermediate-level fire science, emergency medicine, or related discipline. Proof of certification required. Applicable for FIAD technical cognate credit only. Variable credit. Repeatable if topics differ. Permission of department required. Approved for distance education.

**FIAD 3100 Fire and Emergency Services Administration (3).** Fall. Will cover a range of topics/skills necessary to manage and lead a fire and EMS department including: outcome-based budgeting, local, state, and federal legislation, collective bargaining, working in multiple local government models, dealing with budget crisis, mandates and other issues that come to the chief/head administrator on a regular basis. Approved for Distance Education. Prerequisite: admission to the FIAD program.

**FIAD 3300 Principles of Emergency Management (3).** Spring. An overview of the scope and complexity of emergency management. Will cover the all-hazards approach to integrated emergency management, the 4 phases of disasters, the history of disaster policy in the U.S., and the development of the profession of emergency management. In addition to looking at a variety of events (tornadoes, floods, hurricanes, hazardous materials) special focus will be given to emerging and new trends related to hazards and disasters such as pandemics and terrorism. Approved for Distance Education. Prerequisite: admission to the FIAD program.

**FIAD 3500 Analytical Approaches for the Fire & Emergency Services (3).** Summer. This course examines the tools and techniques of analytical decision making in Fire and Emergency Services agencies including data collection, statistics, probability, decision analysis, utility modeling, resource allocation, and cost-benefit analysis. Approved for Distance Education. Prerequisite: admission to the FIAD program.

**FIAD 4100 Applications of Fire Research (3).** Fall. This course examines the basic principles of research and methodology for analyzing current fire-related research. The course also provides a framework for conducting and evaluating independent research in the following areas: fire dynamics, fire test standards and codes, fire safety, fire modeling, structural fire safety, life safety, firefighter health and safety, automatic detection and suppression, transportation fire hazards, risk analysis and loss control, fire service applied research and new trends in fire-related research. Approved for Distance Education. Prerequisites: FIAD 3100 and FIAD 3500.

**FIAD 4300 Political and Legal Foundations of Fire and Emergency Services (3).** Spring. This course examines the legal aspects of the fire service and the political and social impacts of legal issues. Included is a review of the American legal system and coverage of legal and political issues involving employment and personnel matters, administrative and operational matters, planning and code enforcement, and legislative and political processes with regard to the fire service. Approved for Distance Education. Prerequisites: FIAD 3100 and FIAD 3500.

**FIAD 4500 Psychology of Disaster (3).** Summer. This course will focus on the development and use of strategies to deal with issues related to mental trauma during and following emergencies and disasters. Specifically, it will focus on the two main perspectives for dealing with mental trauma: the Post Traumatic Stress Disorder (PTSD) approach and Critical Incident Stress Management (CISM). Short and long term mental health implications for mental trauma issues are considered for fire service and other emergency service responders, victims and others. Approved for Distance Education. Prerequisites: FIAD 3100 and FIAD 3500

**FIAD 4800 Capstone Course: Advanced Fire and Emergency Services Administration (3).** Spring, Summer, Fall. This course requires students to demonstrate mastery of the curriculum learned throughout the entire program. It integrates the functional areas of fire and emergency services administration including: management, public health, public administration, budgeting, planning, decision making, legal issues, and dealing with the political environment. Approved for Distance Education. Prerequisites: FIAD 3100, 3300, 3500, 4100.

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**FIN - Finance**

**FIN 2000 Personal Finance (3).** Personal financial management; budgeting, borrowing sources and costs; auto, property, and life insurance; home ownership financing; personal investment strategy; and retirement planning. Approved for distance education.

**FIN 3000 Business Finance (3).** 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;
FIN 3400  Financial Markets (3).
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  Corporate Finance (3).
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 2000 or STAT 2120 or STAT 2200 and a grade of C or better in FIN 3000.

FIN 4100  International Financial Management (3).
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 4130  Personal Financial Planning (3).
Development of a client’s comprehensive financial plan from the perspective of a professional financial planner. Review and integration of the five practical areas of financial planning including investment, insurance, tax, retirement, and estate planning. Prerequisite: grade of C or better in FIN 3000.

FIN 4140  Retirement and Employee Benefit Planning (3).
Essentials of personal retirement and pension planning and employee benefit planning. Retirement resource needs analysis. Qualified and non-qualified retirement plans, IRA’s, Social Security and Medicare benefits, and other employee benefit pension plans. Plan eligibility and plan distribution options. Tax and government regulations affecting retirement plans. Group life insurance, disability, medical insurance, and other employee benefits. Prerequisite: grade of C or better in FIN 3000.

FIN 4210  Risk Management and Insurance Planning (3).
Methods and alternatives for managing real risk exposures with a major focus on personal risks. 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 and auto insurance, and property and liability insurance. Prerequisite: grade of C or better in FIN 3000.

FIN 4350  Investment Analysis (3).
Security valuation theory and application. Functions and operations of securities markets, appraisal of investment risks of specific securities; valuation and suitability of specific securities for investment. Prerequisites: STAT 2000 or STAT 2120 or STAT 2200 and grade of C or better in FIN 3000.

FIN 4360  Advanced Investment Topics (3).
Extended discussion of application of equity and fixed-income securities analysis and valuation, financial derivatives analysis, and portfolio management. Coverage may include the management of BG SU Student Managed Investment Fund. Prerequisite: Grade of C or better in FIN 4350.

FIN 4450  Management of Financial Institutions (3).
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 4550  Financial Modeling (3).
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  Studies In Finance (1-3).
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.

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FN - Food and Nutrition

FN 1010  Introduction to Dietetics (3).
Fall. Overview of the requirements of a Didactic Program in Dietetics, the professional role of the registered dietitian, and career opportunities. Majors only.

FN 2070  Introduction to Human Nutrition (3).
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  Fundamentals of Food Science (3).
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  Food: Preparation, Availability, and Resources (3).
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  Nutritional Assessment and Counseling (3).
Fall, Spring and Summer session (Distance option only in summer). 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 dietetic practice. Prerequisites: FN 2070 or consent of instructor. Extra fee.

**FN 3260 Food and Culture (3).** 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 3350 Principles and Practice of Food Protection (3).** 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. Approved for distance education.

**FN 3720 Principles of Foodservice Management (3).** 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 Supervised Field Experience in Food and Nutrition (1-5).** 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 4110 Nutrition Care Process (3).** The course will expand basic assessment and counseling skills of the student for the chronically and/or acutely ill patient. Students will study a systematic process of how dietetics professionals provide care through: nutrition assessment, diagnosis, intervention, and monitoring/evaluation. Prerequisite: FN 3100 and admission to Dietetics major.

**FN 4250 Sports Nutrition (3).** Develop an understanding of how macronutrient and micronutrient intake and metabolism fuels the body and affects performance at all levels of activity. Determine energy, protein, and fluid needs using evidenced-based equations. Discuss the appropriate use of supplementation in active and athletic people based on current scientific research. Identify and analyze current myths and controversies associated with sports nutrition. Prerequisite: FN 2070 or consent of the instructor. Approved for Distance Education.

**FN 4310 Experimental Foods (3).** 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 Advanced Nutrition (3).** Spring. Topics in normal nutrition, nutrient metabolism interrelationships, and metabolic integration. Three hours of lecture. Prerequisites: FN 2070, CHEM 3060.

**FN 4340 Medical Nutrition Therapy I (3).** 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 and FN 4110; CHEM 3080 or FN 4320.

**FN 4400 Research Methods in Nutrition, Foods, and Dietetics (3).** Fall. This course provides an overview of research methods in food and nutrition with an emphasis on the location, interpretation, evaluation, and use of nutrition research and evidence based guidelines. Prerequisites: FN 3100 and MATH 1150 or equivalent; FN 4320 or CHEM 3080.

**FN 4420 Laboratory Methods in Food and Nutrition Sciences (4).** 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 Independent Study in Food and Nutrition (1-3).** 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.

FREN 4800 Seminar in Food and Nutrition (3). Fall, and on demand. In-depth examination of contemporary issues, concepts, and topics in food and nutrition. Corequisite: FN 4400.

FREN 4890 Internship in Food and Nutrition (5-12). On demand. Internship in a professional environment. Work settings are approved on an individual basis. May be repeated. Graded S/U.

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FREN - French

FREN 1010 Elementary French I (4). 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 Elementary French II (4). 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 1920Q Inquiry in Humanities and Creative Arts (3). This course focuses on Franco-American relations within a variety of contexts (cultural, historical, political, economic, and social) and explores the impact of major international events and changing power structures on each society’s perception of the other. Credit not allowed for both FREN 1920Q or FREN 2220. Prerequisite: Open only to Freshman students.

FREN 2010 Intermediate French I (3). 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 Intermediate French II (3). 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 Reading French (3). 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. Students may take FREN 2020 and advanced classes after this class, but once a student has taken FREN 2020 or 3000-level classes, FREN 2120 may not be taken for credit. 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 Language and Culture through Community Living (2). 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 French Culture (3). 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 3000 Preparation for Study in France and Burkina Faso (1). Fall, Spring. Limited to participants in AYA/France-Burkina Faso 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 semester, following program application deadline. Conducted in English. Graded S/U.

FREN 3550 French Linguistics (3). Fall. Sound system and grammatical structures of modern French; practical application. Prerequisite: FREN 2020. Usually taught abroad.

FREN 3560 Conversation Across Cultures (3). Fall, Spring. Intensive practice of speaking and comprehension skills in French with content targeting differences in cultural practice in both daily life and work. Students will develop communication skills applicable to a wide range of career choices. Prerequisite: FREN 2020 or four years of French in high school.

FREN 3570 Skills for Effective Writing (3). 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 3580 French for Professions (3). Fall or Spring. Designed to prepare students for the increasingly global job market, this course gives students the vocabulary and expressions, grammatical functions and cultural knowledge necessary to communicate in French in a variety of professional settings. Prerequisite: FREN 3560 or FREN 3570 or consent of instructor.

FREN 3630 Foundations in French Studies (3). Spring. An overview of the cultures and social practices of France, drawing on literacy and cultural texts from all historical periods, but especially from the French Revolution to the present. The course will also emphasize continued development of skill in speaking,
Prerequisite: FREN 3570 or consent of instructor.

**FREN 3660 Foundations in Francophone Studies (3).** Fall. An overview of the diverse cultures and social practices of the French-speaking world outside of France, focusing on a variety of texts, including essays, literature, and films. The course will also emphasize continued development of skill in speaking, reading, and writing. Prerequisite: FREN 3570 or consent of instructor.

**FREN 3750 Paris: Art, History, and Society (3).** This 2-week intensive class introduces students to 2000 years of history and society in France through immersion in the language and culture of the capital city. Students will discover the geography, history, art, and architecture of Paris through daily walking tours and guided visits, as well as readings, discussions, and papers. The course is taught entirely in French. Prerequisite: FREN 2020 or permission of instructor.

**FREN 3820 Topics in French Studies (3).** Fall, Spring. Selected authors, genres, works, or cultural phenomena of French-speaking countries with emphasis on continued development of speaking, writing, and reading skills. Prerequisite: FREN 3570 and either FREN 3630 or FREN 3660, or consent of instructor. May be repeated if topics differ.

**FREN 3830 Topics in Francophone Studies (3).** Fall, Spring. Selected authors, genres, works, or cultural phenomena of Francophone countries with emphasis on continued development of speaking, writing, and reading skills. Prerequisite: FREN 3570 and either FREN 3630 or FREN 3660, or consent of instructor. May be repeated if topics differ.

**FREN 3840 Topics in French/ Francophone Studies (3).** Fall, Spring. Study of selected issues, themes, or cultural phenomena of the French-speaking world with an emphasis on cross-cultural analysis and continued development of speaking, writing, and reading skills. Prerequisite: FREN 3570 and either FREN 3630 or FREN 3660, or consent of instructor. May be repeated if topics differ.

**FREN 3850 Topics in Language and Culture (3).** Fall, Spring. Selected study of particular linguistic issues with emphasis on continued development of speaking, writing, and reading skills. Prerequisite: FREN 3570 and either FREN 3630 or FREN 3660, or consent of instructor. May be repeated if topics differ.

**FREN 3950 Workshop in French (1-3).** 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 French Film (4).** 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 Advanced Composition and Conversation (3).** Development of fluency and accuracy in written and oral skills at an advanced level. Prerequisite: FREN 3560 or FREN 3570.

**FREN 4530 Advanced French Diction (3).** Continued study of pronunciation, stress and intonation. Prerequisite: FREN 3530. Usually taught abroad.

**FREN 4540 Translation Workshop (3).** 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 French Applied Linguistics (3).** 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 Career French I (3).** Terminology used in commercial operations, economics, international trade; emphasis on business correspondence; some translation. Prerequisite: FREN 3560 or FREN 3570.

**FREN 4630 Topics in French Literature (3).** Fall and/or Spring. Advanced study of selected texts, authors, genres, or themes in French literature. May be repeated. Prerequisite: FREN 3630 or 3730.

**FREN 4660 Topics in Francophone Literature (3).** 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 or 3760.

**FREN 4700 Independent Readings in French (1-3).** 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 Topics in French Civilization (3).** Fall and/or Spring. Advanced study of selected themes in French culture and civilization. May be repeated. Prerequisite: FREN 3730 or FREN 3630.

**FREN 4760 Topics in Francophone Civilizations (3).** 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 3660 or 3760.

**FREN 4880 Seminar in French Language, Literature, Art, or Civilization (3).** 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.

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**FTR - Future Studies**

**FTR 2000 Introduction to Futuring (3)**. 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.

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**GEOG - Geography**

**GEOG 1210 World Geography: Eurasia and Africa (3)**. 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 World Geography: Americas and the Pacific (3)**. 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 Weather and Climate (3)**. 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 1940Q Inquiry in Science and Technology (3)**. Applications of the scientific methods to analyze and forecast weather and climate phenomena using near real-time data from ground and satellite-based measurements and numerical weather prediction models. Case-studies and classroom discussion from historical, current weather, climate events and their human dimensions; scientific and technical writing. Course will culminate in a real-world weather forecasting contest. Credit not allowed for both GEOG 1940Q and GEOG 1250. Prerequisite: Open only to Freshman students.

**GEOG 2130 Meteorology (3)**. Fall, Spring. Physical processes of atmosphere and relationships to daily weather patterns. Two one-hour lectures, one two-hour laboratory. Extra fee.

**GEOG 2250 Economic Globalization (3)**. 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. Approved for Distance Education.

**GEOG 2300 Cultural Geography (3)**. 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 2630 The Rising Dragon: China’s Global Reach (3)**. Fall, Summer. This course is a comprehensive survey of contemporary China. It traces the changes occurring in this nation across both space and time. Beginning with China’s diverse natural environments and continuing through its recent past, it presents contemporary China as a product of both past and present internal and external forces. Current and future successes and challenges will be discussed by placing China in context as a massive, yet still-developing, nation that must meet the needs of its 1.3 billion plus citizens while becoming a major regional and global power. Approved for distance education.

**GEOG 3000 Topics in Geography (3)**. Experimental courses considered part of regular offering. May be repeated with different topics.

**GEOG 3030 Severe Weather (3)**. Fall. Occurrence, cause and hazards of blizzards, surface cyclones, hurricanes, severe thunderstorms, tornadoes, lightning, hail, floods, droughts and unusual weather patterns.

**GEOG 3120 Marketing Geography (3)**. 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 Cartography and Map Communication (3)**. 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 Population Geography (3)**. 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 Principles of Conservation Ecology (3)**. 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 Aboriginal Peoples of the United States and Canada (3).
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. Approved for Distance Education.

GEOG 3400 Asia: East, Southeast, and South (3). 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 United States and Canada (3). 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 Africa (3). Analysis of the environmental and human geography of Africa, development opportunities and challenges, as well as contemporary interactions with other parts of the world. Approved for distance education.

GEOG 3490 Latin America Landscapes (3). Fall. This course introduces students to the physical and human landscapes of Latin America. We utilize a regional as well as systematic approach to the study of the geography of Latin America. Topics covered include: physical geography/environment; ancient cultures; colonization and its impacts; demographic characteristics; globalization; political considerations and urbanization. Applicable to the BG Perspective (general education) social sciences and international perspective requirements.

GEOG 3510 Ohio (3). 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 Special Topics in Geography (3). Experimental courses considered part of regular offering. May be repeated with departmental permission.

GEOG 4020 Regional Economic Geography (3). 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 Climatology (3). Fundamentals and applications; drought, water resources, human comfort, health, architecture; short- and long-term climatic changes.

GEOG 4220 Computer Mapping (3). 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 4250 Applied Geographic Information Systems--Human Dimensions (3). 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: SEES 4100 or consent of instructor.

GEOG 4260 Urban Geography (3). 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 Global Atmospheric Problems (3). 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 Global Water Resources (3). 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 Internship (3). 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 Special Problems in Geography (1-3). Readings and research on varied topics to suit needs of student. May be repeated up to 6 hours.

GEOL - Geology

GEOL 1000 Introduction to Geology (3). 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, GEOL 1940Q. Applicable to the BG Perspective (general education) natural sciences requirement. Approved for Distance Education.

GEOL 1010 Earth Systems Science (3). 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, GEOL 1940Q. Not applicable to the BG Perspective (general education) natural sciences requirement.

GEOL 1040 Earth Environments (4). 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, GEOL 1940Q. Applicable to the BG Perspective (general education) natural sciences requirement. Extra fee.

GEOL 1050 Life Through Time (4). 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 lab. Applicable to the BG Perspective (general education) natural sciences requirement. Extra fee.

GEOL 1060 Climate Change and the Frozen Earth (4). 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.

GEOL 1200 Geological Hazards (3). 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 1940Q Geology and Society (3). Fall, Spring, Summer. Scientific inquiry into the Earth, the processes that shape it, and how it affects humankind. Credit allowed for no more than one: GEOL 1000, GEOL 1010, GEOL 1040, GEOL 1940Q. Applicable to the BG Perspective (general education) natural sciences requirement. Prerequisite: Open only to Freshman and Sophomore students.

GEOL 1990 Independent Study (1-3). 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 Geologic History of Man (3). Fall. Evolution, distribution, way of life and geologic history of prehistoric hominids. Applicable to the BG Perspective (general education) natural sciences requirement.

GEOL 2150 Geologic History of Dinosaurs (3). 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 Field-based Physical Geology (5). 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. 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 Field-based Historical Geology (5). 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 Earth Materials I (4). 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 1050, GEOL 1060, or GEOL 2500, and CHEM 1250 or CHEM 1350.

GEOL 3030 Earth Materials II (4). 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 Geology of the National Parks (4). U.S. regional geology as illustrated in the national park system. Three lectures and one two-hour laboratory. Prerequisite: GEOL 1040, GEOL 1050, GEOL 1060, or GEOL 2500.

GEOL 3060 Rocks and Minerals (4). 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 1010.
GEOL 3090 Earth Structures and Tectonics (4). 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 and GEOL 3150 or consent of instructor.

GEOL 3150 Quantitative Methods in Geology (3). Uses of quantitative methods including summary statistics, regression analysis, and data visualization as applied to Geology. Presentation of research results required. Two one-hour lectures and one two-hour laboratory. Prerequisites: GEOL 1040 or GEOL 1050, MATH 1280, or consent of instructor. Corequisite: GEOL 3020.

GEOL 3160 Sedimentation and Stratigraphy (4). Spring. Classification and origins of sedimentary rocks; depositional environments; stratigraphic principles and procedures. Three lectures and one two-hour laboratory. Prerequisite: GEOL 3020.

GEOL 3220 Environmental Geology (3). Spring, alternate years. Environmental aspects of geology, including natural hazards, resource exploitation, waste disposal, pollution and biogeochemical cycles. Prerequisite: GEOL 1040, GEOL 1050, GEOL 1060, or GEOL 2500. Applicable to the BG Perspective (general education) natural sciences requirement.

GEOL 3230 Introduction to Hydrology (3). Spring, alternate years. An introduction to hydrology, including the hydrologic cycle, surface water hydrology, groundwater hydrology, water chemistry, environmental applications of hydrology, and water resources. Students may not earn credit for GEOL 3230 and GEOL 4450 or GEOL 3230 and GEOL 4460. Prerequisites: GEOL 1000, GEOL 1010, GEOL 1040 or GEOL 2500, and MATH 1200, 1220, 1260, 1280, 1300, 1310, 1340, 1350 or Math placement score of 32 or higher; or consent of instructor.

GEOL 4010 Economic Geology (3). Classification and genesis of metallic ore deposits illustrated by study of classic areas. Two lectures and one two-hour laboratory. Prerequisites: GEOL 3020 and GEOL 3090.

GEOL 4050 Volcanology (3). 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 Geomorphology (3). Systematic study of surface processes and landforms; applications to environmental and historical geology. Two lectures and one two-hour laboratory. Prerequisite: GEOL 1040, GEOL 1050, GEOL 1060, or GEOL 2500.

GEOL 4150 Paleontology (3). Fall. Principles of paleontology; major groups of fossil animals. Two lectures and one two-hour laboratory. Field trips outside of class time required. Prerequisite: GEOL 1050 or consent of instructor.

GEOL 4190 Vertebrate Paleontology (3). Fossil vertebrates and their morphology, classification and evolution. Two lectures and one two-hour laboratory. Prerequisite: GEOL 1050 or consent of instructor.

GEOL 4250 Micropaleontology (3). 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 Aqueous Geochemistry (3). Geochemistry of natural waters, including fluid/rock reactions, solution chemistry, solubility, and oxidation-reduction reactions. Two lectures and one three-hour laboratory. Prerequisites: GEOL 3020, MATH 1310 or MATH 1340 (may be taken concurrently) or consent of instructor.

GEOL 4450 Surface Water Hydrogeology (3). Geological aspects of flowing water at the earth's surface, emphasizing open-channel hydraulics, flood analysis, sediment transport and water quality. Two lectures and one recitation section. Prerequisite: GEOL 3160.

GEOL 4460 Groundwater Hydrogeology (3). Hydraulics of groundwater flow, hydrologic properties of geologic materials, evaluation of groundwater resources and contamination. Two lectures and one recitation section. Prerequisite: GEOL 3160.

GEOL 4700 Readings in Geology (1-3). 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 Seminar in Geology (1-3). Study of selected topic. May be repeated. Prerequisite: consent of instructor.

GEOL 4850 Current Topics in Geology (1). 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 Independent Research in Geology (1-3). 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 Field Experience (6). 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 Field Geology (6). 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 Undergraduate Research Experience (1-3).** 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.

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**GERM - German**

**GERM 1010 Elementary Language and Culture I (4).** 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 Elementary Language and Culture II (4).** 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 Beginning Conversational German I (2).** 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 Beginning Conversational German II (2).** Spring. Basic conversational German continued. Prerequisite: GERM 1170, GERM 1010 or permission of instructor. Not open to students who have begun or completed GERM 2010.

**GERM 2000 German Life and Culture (3).** Fall or Spring. Lecture-discussion course in English. Introduction to cross-cultural understanding using a comparative approach to the German-speaking cultures. Understanding of "culture" as emergent, not static; impact of geography, history, religion, tradition, economics on the formation of culture. Topics may include regionalism, urbanization, education, environmentalism, globalization.

**GERM 2170 Intermediate Conversational German I (2).** 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 Intermediate Conversational German II (2).** Spring. GERM 2170 continued. Prerequisite: GERM 2010 or permission of instructor.

**GERM 2200 Studies Abroad (1-5).** Literary, linguistic, or cultural studies completed as part of an approved study abroad program. May be repeated with different topics.

**GERM 2310 Intermediate Reading (3).** 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 Modern German Literature in Translation (3).** 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 General Education humanities and arts and international perspective requirements.

**GERM 3000 Introduction to Study Abroad (1).** 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 Introduction to German Literature (3).** 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 German Literature in Context (3).** 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 fall in Salzburg. Prerequisite: GERM 2020 or permission of instructor.

**GERM 3150 German Culture and Civilization (3).** 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 Contemporary Germany (3).** 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 Composition and Conversation I (2-4).** 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 Composition and Conversation II (2-4).** Spring. GERM 3170 continued. (May be repeated for credit in AYA Austria Program.) Prerequisite: GERM 3170 or permission of instructor.

**GERM 3200 Studies Abroad (1-5).** Literary, linguistic, or cultural studies completed as part of an approved study abroad program. May be repeated with different topics.

**GERM 3310 Workshop in Translation (1-3).** 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 Literature in Translation (3).** Variable topic course on German literature in translation; may center on authors, periods, genres or themes. May be repeated to six hours with different topics. Prerequisite: previous literature course in any department, or permission of instructor. Course does not count towards a German major or minor.

**GERM 3800 Topics in German Language, Thought or Culture (1-3).** Topic chosen to meet curriculum needs and student requests. May be repeated to six hours with different topics.

**GERM 4000 Seminar in German Studies (2-4).** 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 Women and the Third Reich (3).** 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 German Literature and Music (3).** 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 Topics in 18th/19th-Century German Literature (3).** 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 Topics in 20th Century German Literature (3).** 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 The German Film (3).** 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 Contemporary Austria (3).** 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 Professional German (2-4).** Fall. Development of increased facility in speaking and writing; focus on professional settings. (May be repeated for credit in AYA Salzburg Program.) Prerequisite: GERM 3180 or permission of instructor.

**GERM 4180 Stylistics, Syntax, and Structure of German (2-4).** 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 German Drama Workshop (3).** 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 Business German (3).** 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 Advanced German-English Translation (1-3).** 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 Advanced English-German Translation (1-3).** 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 4800 Selected Topics in German (1-4). Topic chosen from literature, culture or language to meet curriculum needs and student requests. May be repeated with different topics.

GERM 4820 Introduction to German Linguistics (3). 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 Studies in German (1-3). 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.

GERO - Gerontology

GERO 1010 Aging, the Individual and Society (3). Fall, Spring, Summer. 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 1930Q Inquiry in Individuals and Society (3). The aging of human society worldwide is rapidly becoming one of the most distinct features of modernity. This course will specifically encourage students to examine the aging of the population and its impact on self and society. Emphasis will be placed on the psychological, cognitive, cultural, and social aspects of the aging process from the standpoint of both the individual and wider society. Commonly held stereotypes, myths, and beliefs about aging will be analyzed.

GERO 3010 Diversity in the Experience of Aging (3). Fall. Examination and analysis of the diversity that exists in the experience of aging within the United States. Applicable to the BG Perspective (general education) cultural diversity in the United States requirement.

GERO 3250 Applied Social Gerontology (3). 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 Psychosocial Aspects of Aging (3). 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 Health and Aging (3). Fall, Summer (online). 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. Approved for distance education.

GERO 4050 Cross-Cultural Aging (3). On Demand. 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 Social Policy & Programs (3). Spring. 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 Principles of Nursing Home Administration (3). 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 Program Development and Grant Writing (3). Spring. Program development (e.g., methods, design, implementation, evaluation, funding) in human services agencies with a special emphasis on grant writing. Prerequisites: GERO 1010 and GERO 4100; GERO majors and minors.

GERO 4220 Research in Social Gerontology (4). 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 Seminar in Gerontology (3). 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 Mental Health and Aging (3). 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: GER 1010; GER 3300; Gero majors and minors only.

GER 4700 Special Topics in Gerontology (1-3). On demand. Independent study on subject matter related to gerontology not otherwise offered. May be repeated. Student may select multiple sections in one semester. Prerequisite: consent of program director.

GER 4910 Practicum in Gerontology (1-20). Fall, Spring, Summer. Experience in working under supervision in selected agencies providing services to the aged. Emphasis on practice rather than observation. Prerequisites: enrollment in gerontology program and permission of program director; senior standing; 2.50 GPA prior to registration. Graded S/U.

GER 4930 Practicum Seminar (1). Fall, Spring, Summer. Analysis of problems and experiences encountered in practicum. Prerequisites: permission of program director and concurrent enrollment in GER 4910. Graded S/U.

GREA - German, Russian, and East Asian

GER 1920Q Inquiry in Asian and European Cultures (3). Introduction to the humanities through investigation of expressions of cultural outlooks in several societies. Exploration of artistic reflections on collective and individual experiences in literature, film, and cultural artifacts, with attention to social, historical, and other influences on cultural outlooks.

GER 2500 Topics in Language and Culture (1-4). Small group and individualized work on special topics. May be repeated if topics differ.

GRK - Greek

GRK 1010 Elementary Greek I (4). Spring. Introduction to ancient Greek with a focus on listening, reading and writing.

GRK 1020 Elementary Greek II (4). 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 Intermediate Greek I (3). 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 Intermediate Greek II (3). 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 Intermediate Greek Literature I (3). Fall. Grammatical review and advanced reading of ancient Greek texts. Prerequisite: GRK 2020 or consent of section leader and instructor.

GRK 3620 Intermediate Greek Literature II (3). Spring. Grammatical review and advanced reading of ancient Greek texts. Prerequisite: GRK 3610 or consent of section leader and instructor.

GRK 4700 Readings in Greek Literature (1-3). 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.

GSW - General Studies Writing

GSW 1100 Intensive Introduction to Academic Writing (5). 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.

GSW 1110 Introduction to Academic Writing (3). Fall, Spring. 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.

GSW 1120 Academic Writing (3). 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.

HDFS - Human Development & Family Studies

HDFS 1050 Human Development across the Lifespan (3). Fall, Spring. Individual and family developmental theories, examination of major domains of knowledge in human development, personal application.
Approved for distance education. Not open to students with credit for HDFS 1930Q.

HDFS 1060  Families, Communities, and Schools (3). 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  Black Families in America (3). Fall, Spring, Summer. 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. Approved for Distance Education.

HDFS 1930Q  Inquiry in Individuals and Society (3). Fall, Spring, Summer. Human developmental theories. Examination of environmental and contextual factors that influence development from birth through the life course, using life-history research, surveys, and questionnaires. May not receive credit for both HDFS 1050 and HDFS 1930Q. Approved for distance education.

HDFS 2020  Contemporary Marriages and Families (3). Fall, Spring, Summer. Analysis of trends in marriage and family relationships in contemporary society including family processes throughout life cycle. Course addresses diversity in the marriage and family experience, the dynamic nature of family systems, and the ways in which families are impacted by the broader social, political, and cultural context. Application to the BG Perspective (general education) social sciences. Approved for distance education.


HDFS 2200  Infant and Toddler Development (3). Fall. Growth and development of infants and toddlers from conception to two years. Developmental theories and characteristics. Implications for enhancing development.

HDFS 2210  Child Development (3). 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 2250  Family Systems & Community Partnerships (3). Fall, Spring, Summer. Application of ecological systems theory as a foundation for understanding family dynamics, parenting, family and cultural diversity as it applies to Early Childhood Education with a focus upon family school and community partnerships. Approved for Distance Education.

HDFS 2280  Preadolescent and Adolescent in Family and Community (3). Fall, Spring, Summer. Development and socialization of preadolescents and adolescents. Focus on biological, cognitive, and socio-emotional factors associated with youth competencies and maladjustment within an ecological framework. A review of research relevant to policy, programming, and intervention. Prerequisite: HDFS 1050 or consent of instructor. Approved for distance education.

HDFS 2290  Adult Development and Aging (3). 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 HDFS 1930Q or consent of instructor.

HDFS 3010  Teaching Young Children I: Preschool (3). 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  Approaches to Pre-Kindergarten Teaching and Learning (3). 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  Family Resource Management (3). Fall, Spring, Summer. The allocation of families' human and non-human resources are explored drawing upon contextual and economic decision-making processes. The impact of economic and financial conditions upon family dynamics is discussed. Prerequisites: HDFS 1060, HDFS 2020, and sophomore status. Approved for Distance Education.

HDFS 3080  Communication Strategies (3). Fall, Spring, and Summer. Instructional techniques, public speaking, materials development, digital technology, interactive learning activities, literature search strategies, software packages, and basic newsletter and website development.

HDFS 3200  Pre-Kindergarten Practicum (3). 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. Extra Fee.

**HDFS 3220 Child Development Practicum (3).** 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 Children and Families Under Stress (3).** Fall, Spring, Summer. 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 1050 or HDFS 1930Q, HDFS 2020, HDFS majors only, and sophomore status. Approved for Distance Education.

**HDFS 3270 Family Interaction (3).** Fall, 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 or HDFS 1930Q, HDFS 2020, HDFS majors only, and sophomore status.

**HDFS 3290 Families in Middle and Later Years (3).** Fall, Spring. Life course perspective to examine families in the middle and later years, with emphasis on intergenerational family relationships. Identification and critical analysis of factors associated with successful aging within families. Prerequisites: HDFS 1050 or HDFS 1930Q, HDFS 2020, HDFS majors only. Approved for distance education.

**HDFS 3300 Family Life Programming and Evaluation (3).** Fall, Spring. Examine family life education programs/practices and dimensions of an educator’s role. A critical appraisal of students’ professional competency to teach family life education material will also be completed. Prerequisites: HDFS 1050 or HDFS 1930Q, HDFS 2020, HDFS majors only.

**HDFS 3900 Professional Development in Human Development and Family Studies (3).** 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 or HDFS 1930Q, HDFS 2020, GPA 2.25, junior status.

**HDFS 4070 Research Methods in Human Development and Family Studies (3).** Spring, Fall. Research methodology: completing a research project on a topic of the student’s choice in the area of human development and family studies. Prerequisites: HDFS majors only, junior standing, MATH 1150. Approved for Distance Education.

**HDFS 4100 Child and Family Policy (3).** Fall, Spring. The identification, development, implementation, and evaluation of public, private sector, and social policies that pertain to children and families. Prerequisites: HDFS 1060, HDFS 3250, HDFS majors only or permission of instructor, junior Status. Approved for Distance Education.

**HDFS 4110 Parenting Processes (3).** Spring, Fall. Theories and processes of parenting with an emphasis on the inter-personal dynamics of parent-child relationships. Prerequisites: HDFS 1050 or HDFS 1930Q, HDFS 2020, HDFS majors only and junior status. Approved for Distance Education.

**HDFS 4200 Nurturing Positive Behavior (3).** 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.

**HDFS 4210 Parent/School/Community Partnerships (3).** 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 Cognitive Development of the Young Child (3).** 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 Organization of Programs for Young Children (3).** Spring. Factors in organization and administration of programs for young children. Prerequisite: HDFS 3220 or consent of instructor. C/F hrs.: 20.

**HDFS 4270 Introduction to Marriage and Family Counseling (3).** Spring. Marriage and family counseling, including professional issues, major theories and techniques, introduction to family counseling skills. Prerequisites: HDFS 1050 or HDFS 1930Q and HDFS 3020 or consent of instructor.

**HDFS 4280 Sexuality in Human Development and Family Studies (3).** 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 4504 Development and Learning in Children 8-12 (3).** Summer. This class emphasizes ages and stages of children's growth and development between the ages of 8 and 12. Theories of development/learning/motivation are explored. Learning approaches,
classroom management strategies and the middle school philosophy are examined. The philosophical foundation for the education of 8 to 12-year-old children is examined. Prerequisites: Completion of BGSU Field Block II (K-3 Practicum) with a C/P or higher in all courses or an ECE Provisional License in Ohio. Approved for Distance Education.

HDFS 4890 Internship (7-12). 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 Prekindergarten Teaching Practicum (7). 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.

HHS – Health & Human Services

HHS 1000 Seminar Health and Human Services (1-5). On demand. Interdisciplinary study of special health or human service topics. May be repeated. Prerequisite: consent of dean's office.

HHS 3950 Workshop on Current Topics in Health and Human Services (1-4). On demand. Current topics and issues in health and human services areas. May be repeated if topics differ, with approval of program adviser.

HHS 4400 Seminar Health and Human Services (1-5). On demand. Interdisciplinary study of special health or human service topics. May be repeated. Prerequisite: consent of dean's office.

HIST - History

HIST 1510 World Civilizations (3). Fall, Spring, Summer. Comparative study of how and why economic, social, political and intellectual factors shaped and defined the history of Western civilizations in the ancient and medieval periods. Applicable to the BG Perspective (general education) social sciences and international perspective requirements.

HIST 1520 The Modern World (3). 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. Approved for Distance Education.

HIST 1800 Asian Civilizations (3). 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 Special Studies in History (2-3). On demand. Study of selected topics, methods, or subject areas. May be repeated if topics differ.

HIST 2050 Early America (3). 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 Modern America (3). 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 Special Studies in History (2-3). On demand. Study of selected topics, methods, or subject areas.

HIST 3010 American Military History (3). Summer. Development of American military institutions, policies, strategy, tactics from American Revolution to present.

HIST 3030 World War II (3). 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 The Bible as History: The New Testament (3). 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 The Bible as History: The Old Testament (3). 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 the Bible.

HIST 3060 History of Ohio (3). Spring. Precolonial background, early exploration, settlement, Ohio's place in national development in the 19th and 20th centuries.
HIST 3090 Latin America Before Independence (3). 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 Modern Latin America (3). 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 United States-Latin American Relations, 1810-Present (3). 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 Black Religion and Culture (3). 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 Slavery in the Americas (3). 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 African Cultures and Societies (3). 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 Indian in American History (3). Spring. Fall. Indian responses to the European invasion of North America, Indian-white relations in the 19th and 20th centuries, Indian contributions to American culture and contemporary Indian life and culture on and off the reservation. Applicable to the BG Perspective (general education) cultural diversity in the United States requirement. Extra fee.

HIST 3260 Women in American History (3). 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 Women in Modern Europe (3). 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 The Vietnam War (3). 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 3380 American Environmental History (3). Fall. Three centuries of changing American attitudes and actions toward the natural environment, the rise of the conservation movement, and the development of an ecological perspective. Prerequisite: completion of GSW 1120. Credit allowed for only one of HIST 3380, ACS 3380.

HIST 3570 English Origins of American Law (3). Fall. Medieval and early modern English history; origin and growth of legal and constitutional doctrines, institutions and procedures important to understanding the American legal system.

HIST 3600 Representative Personalities of 20th Century (3). Spring. History of the 20th century looking at major themes and the roles played by leading individuals in them.

HIST 3670 Hitler's Germany: Rise and Fall of Nazism (3). Fall. Major developments in Germany from defeat in 1918 through collapse in 1945 and recovery in Cold War era. Weimar Republic, Hitler, Third Reich, post-war reactions and conditions; key to causes and effects of Nazi totalitarianism and racism.

HIST 3770 20th Century Europe (3). Spring, Fall, Summer on demand. European historical development in 20th century; major forces, events and experiences that have shaped Europe and its place in contemporary world. Applicable to the BG Perspective (general education) social sciences and international perspective requirements.

HIST 3810 United States and Asia (3). 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 Chinese Civilization (3). 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 Korean Civilization (3). 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  Special Studies in History (1-3). 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. Approved for distance education.

HIST 4000  Topics in History (2-3). On demand. Study of selected topics or subject areas. Course may be taken more than once for credit if topics differ. Approved for distance education.

HIST 4010  Caesar and Christ: Social Worlds of Late Antiquity and Early Christianity (3). 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  Colonial Africa (3). 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  Contemporary Africa (3). 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  Africa and World Politics (3). 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 4070  Modern China (3). On demand. Late Ch’ing (Qing) reforms, the Nationalist and Communist revolutions, and China’s struggle for modernization. Development of Chinese culturalism, nationalism and socialism.

HIST 4080  Pre-Modern Japan (3). On demand. History of Japan from earliest recorded civilization to the Tokugawa Period (1600-1868); origins of Japan, influence of Chinese and Korean civilizations, socio-economic development, high culture, trends in intellectual history, development of feudalism, samurai, and foundations of modern nation state.

HIST 4090  Modern Japan (3). 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  Modern Mexico (3). 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  Caribbean and Spanish Main (3). 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  Canada (3). 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  Spain and Portugal (3). 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  American Colonial History, 1492-1763 (3). 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  American Revolutionary Era, 1763-1789 (3). On demand. Social, cultural, and political analysis of the US, 1763-1789, through the study of ordinary people as well as famous political leaders. Themes include class, race, gender, and religion. Topics include revolutionary protest, Patriot and Loyalist hostilities, the Declaration of Independence, turning points in the war, slavery and emancipation, alliances with Native Americans and Europeans, postwar socio-economic crisis, state and federal constitution-making, and present-day memory of the Revolution.

HIST 4250  Early National U.S., 1789-1848 (3). 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. Approved for distance education.
HIST 4260 Civil War and Reconstruction, 1861-1877 (3).
Spring. Political, economic and cultural conditions during the War; resulting problems to peoples and governments of both sections continuing through postwar period. Approved for distance education.

HIST 4280 America Becomes Modern: 1877-1917 (3). 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 America Comes of Age: 1917 - 1945 (3). 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 4320 Aspects of African American History (3). 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 American Constitutional History (3). 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 4380 United States and the World, 1890-1945 (3). 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 United States and the World: The Cold War Era (3). 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 4420 Roman Revolution: From Gracchi Through Caesar Augustus (3). 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 The Making of Europe (3). 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 Early Modern Europe 1450-1750 (3). 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 European Foreign Relations, 1914-Present (3). 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 Europe Since 1945 (3). 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 The Holocaust and Anti-Semitism (3). 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 4590 Great Britain, 1689-Present (3). 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 Imperial Russia (3). 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 20th Century Russia (3). 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 Russian Political Economy (3). 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 The Atlantic World, 1500-1800 (3). 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 4790 Research Methods and Historiography (3). Fall, Spring. This course is a reading and research class in which students will examine key themes in Western historiography and how historians write, interpret, and conceptualize the past. Students will be expected to use course readings and discussion to critique the process of how historians do research, interpret sources, and present the past. Additionally, students will learn how to set up their own historical research.

HIST 4800 Research Seminar (3). 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 Internship (1-3). 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 Workshop on Current Topics (1-3). 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 Readings in History (1-3). 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.

HIT 1000 Introduction to Health Information Systems (3). 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.


HIT 1120 Coding and Classification Systems ICD-10-CM (3). Coding, classifying and reimbursement systems utilizing ICD-10-CM. Skill in utilizing computerized encoding systems and application of reimbursement systems. Prerequisites: AHTH 1310 or equivalent, AHTH 1100 or MEDT 3010, and AHTH 1600.


HIT 1600 Comparative Health Records (1-3). 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. Approved for distance education.

HIT 2000 Information Systems for HIT (3). 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. Approved for distance education.

HIT 2010 Laboratory Simulation (2). Application of health information management theory to professional practice in a supervised learning experience in an on-campus, structured laboratory practical. Six laboratory hours per week. Prerequisites: HIT matriculation requirements for clinical practice, HIT 1000, HIT 1040, and HIT 1120. Corequisites: HIT 2110 and HIT 2030. Graded S/U.

HIT 2030 Coding and Classification Systems: HCPCS and CPT (2). Coding, classification, and reimbursement systems utilizing HCPCS and CPT.
Prerequisites: AHTH 1310, AHTH 1100 or MEDT 3010, and AHTH 1600, or permission of instructor. Approved for Distance Education.

**HIT 2050 Reimbursement Methodologies (2).** Use of coded data and health information in reimbursement and payment systems appropriate to all health care settings and managed care. Prerequisites: HIT 1120 or HIT 2030 or junior status in allied health care major. Offered at Firelands only. Approved for Distance Education.

**HIT 2100 Organization and Supervision of Health Information (1).** 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. Approved for distance education.

**HIT 2110 Health Care Statistics and Data Literacy (3).** 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/senior status. Offered at Firelands only. Approved for Distance Education.

**HIT 2130 Advanced Coding (2).** Coding, classifying and reimbursement systems utilizing ICD-9-CM and HCPCS/CPT. One hour lecture, two hours assigned lab. Prerequisites: HIT 1120 and HIT 2030. Approved for distance education.

**HIT 2150 Clinical Assessment and Performance Improvement (1).** Principles of quality assessment process and provision of a framework for joining skills in collecting and analyzing data in health care. One hour lecture. Prerequisites: HIT 2110 and BAT 2090, or junior standing in an allied health major with permission of instructor. Approved for distance education.

**HIT 2200 Professional Practice Experience (2).** 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 80 professional practice experience hours per semester. Prerequisite: HIT 2100. Graded S/U.

**HIT 2250 Medical Documentation and Transcription (3).** Use of medical documentation and transcription with electronic health record template applications including front-end speech recognition and other forms of point-of-care documentation techniques. 2 hour lecture, 2 hour lab. Prerequisite: MEDT 3010, AHTH 1310, and pass a proficiency test in keyboarding and basic document editing. Approved for distance education.

**HIT 2900 Topics in Health Information Management Technology (1-3).** Health Information Management 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 Field Experience (1-3).** Paid field work in a health information management department under supervision of a qualified health information manager with the consultation of the program director. Prerequisite: permission of instructor.

**HNRS - Honors**

**HNRS 2010 Introduction to Critical Thinking (4).** 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 Critical Thinking about Great Ideas (3).** Spring. Interdisciplinary seminar on some of the influential ideas of human culture. Emphasis on reading of primary texts and the application of critical thinking to the evaluation of these ideas. In addition, the integration and synthesis of relationships between ideas will be stressed and organized around different ontological assumptions. Prerequisite: HNRS 2010 and admission to the BGSU Honors Program.

**HNRS 2400 Honors Seminar: Social Sciences (3-5).** Interdisciplinary social science 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 Honors Seminar: Natural Sciences (3-5).** 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 Interdisciplinary Humanities Seminar (3-5).** 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.
HNR S 2990 Honors Project (2). Spring. Students will work with a faculty member who will advise work on a research or creative project. Outcomes of the course are a thorough understanding of the project background in the chosen field, a developed bibliography, a proposal, and a completed Honors Project. Prerequisites: 10 completed Honors credit hours (including HNRS 2010 and 2020) and enrollment in a Firelands associate degree program. Offered at Firelands only.

HNR S 3000 Special Topics Seminar (1-3). 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.

HNR S 3010 Critical Thinking about Values (6). Fall. Interdisciplinary seminar designed to develop critical thinking skills and their applications to personal values. Critical analysis of arguments and ideas through the effective evaluation of values. Students will gain the skills necessary for effective career and educational planning including the development of a four-year course plan and introduction to campus resources. Prerequisite: admission to the honors program. The first of a four-semester sequence that will fulfill the BG Perspective (general education) requirement and a requirement to graduate with Presidential Honors.

HNR S 3020 Values in Ideas and Leadership (6). Spring. Interdisciplinary seminar designed to continue to develop critical thinking skills and attitudes through reading and discussing conflicting perspectives about a few of the ideas that have shaped who we have become as a society. The construction and persuasive explanation of synthetic relationships among ideas and leadership within those ideas. Prerequisite: admission to the honors program. The second of a four-semester sequence that will fulfill the BG Perspective (general education) requirement and a requirement to graduate with Presidential Honors.

HNR S 3030 Values in Action (6). Fall. The major objectives of this course are the application of critical thinking and values discussion to the needs and concerns of the local community while identifying root causes of societal problems. Topics include the theoretical context of the problem(s) posed, community-based service-learning projects, reflection on and presentation of outcomes of service learning. Prerequisite: admission to the honors program. The third of a four-semester sequence that will fulfill the BG Perspective (general education) requirement and a requirement to graduate with Presidential Honors.

HNR S 3040 Values in Scholarship (6). Spring. The major objectives of this course are to encourage and connect critical thinking with personal and professional goals and to introduce the student to scholarship within the broad disciplinary area of their major. Different sections will be grouped according to the common types of Honors projects, as the capstone experiences, within their colleges and majors. Prerequisite: admission to the honors program. The last of a four-semester sequence that will fulfill the BG Perspective (general education) requirement and a requirement to graduate with Presidential Honors.

HNR S 4000 Special Topics Seminar (1-3). 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.

HNR S 4900 Independent Study in Honors (1-5). 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.

HNR S 4980 Honors Project Development (1). 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 Honors Project proposal. Prerequisites: HNRS 2010 or HNRS 3010 and either A&S 2500H, HNRS 2020, or HNRS 3020.

HNR S 4990 Honors Project (2). 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 4980. Prerequisites: HNRS 4980 and permission of the Honors Director.

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HP – Health Promotion

HP 2150 Health & Wellness (3). 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 Introduction to Community and Worksite Health Promotion (3). 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 3100 Program Planning and Evaluation (3). 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 Health Promotion and the Health Care System (3). 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 3400 Drug Use and Abuse (3).** 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 Practicum in Health Promotion (1-6).** 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 Workshop on Current Topics (1-3).** 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 Ergonomics (3).** 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 Organization and Administration of Health Promotion Programs (3).** 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 Health Behavior Instructor (3).** Students will obtain the knowledge, skills, and strategies for implementing and instructing behavior change programs in weight management, stress management, and smoking cessation. Approved for Distance Education.

**HP 4700 Independent Study in Health Promotion (1-3).** 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.

**ID 1170 Interior Design I (3).** 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 Interior Design II (3).** Fall, Spring. Programming, conceptualization and problem solving for residential and non-residential environments. Prerequisites: ID 1160, ID 1170. Six studio hours. Extra fee.

**ID 3030 Building Materials and Finishes for Interiors (3).** Spring. Physical properties of interior and exterior building materials, manufacture, installation/use and aesthetic possibilities. Establish basic concepts of human psychology, need for comfort, performance and maintenance as relevant to building materials and finishes. Prerequisites: ID 1160, ID 2190.

**ID 3190 Interior Design III (3).** 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 Interior Design IV (3).** 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 Specifications, Codes, and Special Needs (2).** 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  Computers and Interior Design (3). 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  Lighting Design for Interior Environments (3). 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 3800  Computer-based Rendering for Interiors (3). Fall, Spring. Digital rendering of interior design drawings using computer programs for production of digital presentation drawings and portfolios for interior environments, and self-marketing/branding material related to interior design. Prerequisites: ARCH 1050, ID 2190 and ID 3450.

ID 4060  Housing the Family (3). 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. Extra Fee.

ID 4070  Green, Sustainable, and Universal Design for the Built Environment (3). Fall only. 3 contact hours. A study of the requirements for Leadership in Energy and Environmental Design (LEED) Building Certification and Professional Accreditation. History, philosophy and implementation of Universal Design Principles. Prerequisite: ID 2190.

ID 4170  Interior Design V (3). 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  History of Interiors (3). 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  Interior Design VI (3). 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  Professional Practice in Interior Design (3). Fall. Ethics and business procedures for interior designers. Estimating, scheduling, budgeting and contract writing for installation of project. Format and content of NCIDQ are studied in preparation for the professional licensure exam. Resume and portfolio preparation for the profession. Prerequisites: ID 3190, ID 3290.

INST 1930Q  Inquiry in Individuals and Society (3). Fall, Spring, Summer. Exploration, through a theme, of some forms of globalization, their processes and impacts on societies, groups, and individuals. Introduces interdisciplinary analysis of evidence in order to produce informed conclusions or judgements on global issues. Prerequisite: Open only to Freshman students.

INST 2000  Introduction to International Studies (3). 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  Communicating in Global Contexts (3). 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 COMM 2100 and INST 2100. Prerequisite: COMM 1020 and COMM 2010, or student must either be an International Studies major/minor or enrolled in the Global Village.

INST 3000  Theories and Methods in International Studies (3). Fall. Overview of concepts, theories and methods related to international/global/transnational studies, while examining themes and history of globalization. Prepares students to develop a coherent framework for their focus area. Prerequisite: INST 2000.

INST 3800  Topics in International Studies (3). 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 3900  International Studies in Context (1-3). On demand. Impact of the processes of globalization in the culture, environment, history, and/or politics of different locations in the world. Includes 1 to 2-week field trip abroad to gain firsthand experience of these processes. May be repeated if topics differ up to 9 credit hours.

INST 3950  Predeparture Orientation for Education Abroad (1). Preparatory experience. Introduction to cultural differences and how to adapt to living in a new culture. Exploration of cultural stereotypes and ethnocentrism as well as cultural values and customs. Learning of safety and health issues while abroad.

INST 4000  Seminar in International Studies (3). 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: INST 3000. IS major or minor and senior status.

**INST 4700 Independent Studies in International Studies (1-3).** On demand. In-depth study of a particular aspect, problem, or theory related to international/global/transnational studies. Prerequisites: consent of program director and instructor. May be repeated if topics differ up to six credits.

**INST 4890 Internship (1-12).** Applied experience for majors. Specific proposal and permission of program adviser required prior to enrollment. Guidelines available from advisor. Graded S/U.

**ITAL - Italian**

**ITAL 1010 Elementary Italian I (4).** 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 Elementary Italian II (4).** 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 Intensive Elementary Italian (4).** Spring. Intensive course emphasizes grammatical structure of language and oral practice. Recommended for graduate students and students with prior language experience.

**ITAL 2000 Study Abroad I (3).** On demand. Intermediate in country Italian language and culture training. Repeatable up to 6 hours if topics vary. Prerequisite: ITAL 1020 or equivalent.

**ITAL 2010 Intermediate Italian I (3).** 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 Intermediate Italian II (3).** 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 2600 Dante and His World (3).** Readings in English of Dante’s Divine Comedy, particularly Inferno. May include some readings of other relevant classic and Italian authors.

**ITAL 2610 The Italian Cinema (3).** Modern Italian culture and literature movements and their expression in cinema; demonstrates close relationship between literature and cinema. In English. Extra Fee.

**ITAL 2620 Mafia in the Movies (3).** Fall or Spring. Identifies and explores cross-cultural and transnational stereotypes of the phenomenon of the Italian Mafia in America and Italy. In English.

**ITAL 3000 Study Abroad II (3).** On demand. Advanced in country Italian language and culture training. Repeatable up to 6 hours if topics vary. Prerequisite: ITAL 2020 or equivalent.

**ITAL 3610 Introduction to Italian Literature (3).** Chronological evaluation of outstanding works in Italian literature from Middle Ages to present; various movements and genres. Prerequisite: ITAL 2020.

**ITAL 3710 Italian Civilization I (3).** Political, social, intellectual, artistic life from Middle Ages through 19th century. Background for literary studies and preparation for teaching of Italian. Prerequisite: ITAL 2010.

**ITAL 3720 Italian Civilization II (3).** ITAL 3710 continued; political, social, intellectual, artistic life of modern Italy. Prerequisite: ITAL 2020.

**ITAL 4700 Independent Readings in Italian (1-3).** 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.

**JAPN - Japanese**

**JAPN 1010 Elementary Language and Culture I (4).** 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 Elementary Language and Culture II (4).** 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 1020H Elementary Language and Culture II (4).** 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 Study Abroad I (2-6). 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 Intermediate Japanese I (4). 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 Intermediate Japanese II (4). 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 Japanese Culture (3). 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 and international perspective requirement.

JAPN 2160 Contemporary Japanese Society (3). 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 Study Abroad II (2-6). 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 Third Year Japanese I (3). 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 Third Year Japanese II (3). Spring. JAPN 3010 continued. Three class periods and scheduled oral practice each week. Prerequisite: JAPN 3010 or equivalent.

JAPN 3120 Introduction to Japanese Literature (3). 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 Japanese Film (3). 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 Selected Topics in Japanese (1-3). 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 Studies in Japanese (1-3). Independent reading for the advanced student. Prerequisites: arrangement with instructor and consent of department chair prior to registration. May be repeated.

JOUR - Journalism

JOUR 1000 Introduction to Journalism in a Democratic Society (3). Fall, Spring, Summer. Modern journalism and mass communication; mass communication media and effects; role and influence of journalistic forms such as newspapers, magazines, video, online media and related fields of advertising and public relations. Open to nonmajors. Credit not given for both JOUR 1000 and TCOM 1030.

JOUR 2000 Introduction to Journalistic Writing (3). Fall, Spring. Summer. Introduction to journalistic writing in a variety of forms; 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 Journalism Techniques for Nonmajors (3). 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 Reporting (3). 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 in various media forms. Prerequisite: JOUR 2000. Approved for Distance Education. Extra fee.

JOUR 2550 Multimedia Reporting Skills (1). Fall, Spring. Introduction to the technical and aesthetic principles of gathering journalistic content in multiple digital forms, including audio, still photography and video. Basic techniques involved in gathering, processing and presenting multimedia content, including HTML. Prerequisites: JOUR 2000 and access to a suitable consumer-grade still/video camera and digital voice recorder. Concurrent registration with JOUR 2500 suggested. Extra Fee.

JOUR 2900 Specialized Journalism Basic Skills (1-3). 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 Introduction to Visual Journalism (3). Introduction to news reportage through visual media. Includes sections on basic photographic techniques, such as composition, exposure, camera handling, and digital photo processing. Also includes caption writing, news judgement and journalism ethics. Prerequisites: JOUR 2000 and access to 35mm digital camera. Extra fee.

JOUR 3150 Visual Editing (3). 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 Feature Writing (3). Fall, Spring. Developing story ideas, researching and writing newspaper, magazine and online feature articles and multimedia content; researching free-lance markets. Prerequisites: JOUR 2500; major or minor status; junior standing. Extra Fee.

JOUR 3250 News Editing and Production (3). Fall, Spring. Theory and practice in editing local and wire news, headline writing, picture editing, evaluating news, layout and design for print and online forms and developing online content. Prerequisite: JOUR 2500; major or minor status; junior standing. Extra Fee.

JOUR 3300 Broadcast News (3). 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, presenting video-based stories in online forms. Student must provide own video cassettes. Prerequisites: JOUR 2500; JOUR 3150; major or minor status; junior standing. Extra fee.

JOUR 3400 Principles of Public Relations (3). 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 Principles of Public Relations for Nonmajors (3). 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 Public Relations Writing (3). Fall. Planning and preparation for print, audio-visual, and online public relations messages. Fundamentals of writing for publications including newsletters, house journals, pamphlets and brochures, online and social media. Prerequisites: JOUR 2500 and JOUR 3400; major or minor status; junior standing.

JOUR 3450 Media Publication and Design (3). 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 3550 Online Journalism (3). 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. Extra Fee.

JOUR 3850 Journalism in the Movies (3). 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 Intermediate Specialized Journalism Skills (1-3). 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 Field Experience (1-3). 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 Advanced Visual Journalism (3). 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 Supervision of High School Publications (3). For prospective teachers of high school journalism or advisers of school newspapers or yearbooks. Problems of editorial supervision, business management and production. Sophomore standing required. Open to nonmajors.

JOUR 4200 Public Affairs Reporting (3). 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. Extra Fee.

JOUR 4300 Advanced Broadcast News (3). Spring. Writing, editing, producing and anchoring for broadcast. Emphasis on ENG shooting and editing, field reporting and studio
production, and online presentation. Research on issues affecting broadcast journalists. Student must provide own videotape cassette. Prerequisites: JOUR 3300; major or minor status; junior standing. Extra fee.

JOUR 4400 Public Relations Campaigns (3). 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 4450 Media, War and Propaganda (3). Fall. This course examines propaganda and persuasion. The course focuses on the interdependence of propaganda agencies (political, military and intelligence communities), communications media (informational and entertainment) and public opinion reinforcement or change, in conflict-related propaganda and counter-propaganda in contexts of war and terrorism, both historical and contemporary.

JOUR 4500 Journalism Law and Ethics (3). 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 Diversity Issues in the Media (3). 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 4650 American Journalism History (3). 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 Global Journalism (3). Spring. Social, economic and political factors, organization and control in the national news and informational systems of countries around the world. Open to nonmajors. Credit cannot be earned in both this course and MC 5750.

JOUR 4800 Special Problems in Journalism (1-3). 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 Media and Society (3). Spring. Media as institution, its role, content, effects and responsibilities as a cultural force in society. Topics vary. Open to nonmajors.

JOUR 4900 Specialized Journalism Skills (1-3). Fall, Spring, Summer. Topics vary based on student and faculty interest and developments in the profession. May be repeated.

JOUR 4950 Specialized Journalism Issues (1-3). Fall, Spring, Summer. Topics vary based on student and faculty interest and developments in the profession. May be repeated. Approved for Distance Education.

KNS – Kinesiology

KNS 1160 Soccer (2). Fall, Spring.

KNS 1210 Tennis (1). 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 Track and Field (2). Fall.

KNS 1240 Volleyball (2). Fall, Spring.

KNS 1370 Educational Dance (1). Fall. An introduction to the Movement Approach as a participant in educational dance. One two-hour laboratory.

KNS 1380 Educational Gymnastics (1). Fall. An introduction to the Movement Approach as a participant in educational gymnastics. One two-hour laboratory.

KNS 2090 Golf (1). On demand. Skill and knowledge development basic to participation and understanding of golf. One two-hour laboratory. Extra fee.

KNS 2170 Softball (1). Fall.

KNS 2180 Swimming (1). Fall. Extra fee.

KNS 2240 Outdoor Leisure Pursuits (1). 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 Introduction to Kinesiology (3). 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 Lifetime Fitness (2). 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 Structural and Functional Bases of Human Movement (3). 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 Performance and Content Development in Invasion Games (3). Fall. Skill/strategy development for advanced performance/understanding of invasion games, content progression, and the integration of fitness concepts. Two 1-hour lecture/one 2-hour laboratory.

KNS 2330 Performance and Content Development in Net/Wall Games (3). Spring. Skill/strategy development for advanced performance/understanding of net/wall games, content progression, and integration of fitness concepts. Two 1-hour lecture/one 2-hour laboratory.

KNS 2340 Performance and Content Development in Field and Target Games (3). Fall. Skill/strategy development for advanced performance/understanding of field and target games, content progression, and integration of fitness concepts. Two 1-lecture/one 2-hour laboratory.

KNS 2350 Professional Reading and Writing in Physical Education (1). On demand. Reading and interpretation of literature in physical education; writing professional paper; treatment of pertinent statistical techniques. Prerequisite: GSW 1120.

KNS 2380 Performance and Content Development in Educational Gymnastics (3). Fall. Advanced movement quality, content integration in educational gymnastics and integration of fitness concepts. Two 1-hour lectures, one, 2-hour laboratory.

KNS 2390 Applied Sport Science (3). This course focuses on the needs of coaches by providing an overview and application of scientific principles and concepts of strength and conditioning in sport. Prerequisite: Declared coaching minor or permission of instructor.

KNS 2410 Educational Games Teaching to Children (3). Fall or Spring. Movement approach to games/sports/fitness for understanding with special emphasis on age-appropriate content, methodology and progression. Two 1-hour lectures, one 2-hour laboratory. Prerequisite for KNS 4320.

KNS 2420 Human Movement in Early Childhood (2). 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 Human Movement in Middle Childhood (2). 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 Introduction to Pedagogy, Coaching and Leadership (3). Introduction to the teaching and coaching of physical activity. Prerequisite: KNS 2320 or KNS 2330 or KNS 2440 or KNS 2410. Extra Fee.

KNS 3050 Teaching Games for Understanding (3). New developments in games teaching and team sport coaching that are game-focused, player/student-centered and inquiry-based have generated considerable interest in recent years. This course will focus on the most prominent method in this approach to teaching and coaching called Teaching Games for Understanding. Prerequisites: KNS 2320 or KNS 2330 or KNS 2340 or KNS 2410 and KNS 2470.

KNS 3120 Instructional Strategies in Physical Education (3). Fall, Spring. Developing and enhancing effective instructional strategies within physical education environments toward the teaching goal of developing skillful movers. Two - 1 hour lectures/one - 2 hour laboratory. Prerequisite: KNS 2470.

KNS 3130 Cardiopulmonary Resuscitation, First Aid, and Safety (2). 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 Instructors Advanced First Aid and Emergency Care (1). 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 Cardiopulmonary Resuscitation Recertification (1). 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 Water Safety Instructor’s Course (2). 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  Principles, Ethics and Problems in Sport Coaching (3). Fall, Spring. This course is designed to explore "off the field" ethical concerns and situations that current coaches in the youth sport setting may encounter to help them better deal with and avoid potential issues. Participants will explore their own coaching practices to determine if there are areas of concern. Participants will create their own "ethics guide" to use in future coaching situations. Ethical concerns specified by the Ohio Department of Education will also be explored. Participants will learn how to address and deal with ethical coaching concerns. Prerequisite: KNS 2470.

KNS 3290  Coaching Football (3). 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  Coaching Basketball (2). Spring. Administration, organization, philosophy, theory, strategy, methods and responsibilities of coaching basketball. One lecture, two lab hours per week. Prerequisite: KNS 2030-Basketball.

KNS 3330  Adapted Physical Activity (3). Principles, objectives, history, and programming of adapted physical activity with an overview of disabilities in physical activity settings. Two 1-hour lectures and one 2-hour laboratory. Prerequisite: EDFI 3020 or 3030; and KNS 2470 or EDHD 2010 or TLEP 2100.

KNS 3370  Performance and Content Development in Educational Dance (3). Spring. Advanced movement quality and content integration in educational dance. Two one-hour lectures, one two-hour laboratory.

KNS 3390  Practicum: Sport Coaching (3). Offers prospective instruction and guided experiential learning regarding specific tactics, planning, teaching, and administrative functions essential to effective coaching. Taken during semester in which selected sport is in season. One lecture hour and arranged practicum hours. Prerequisites: AT 2100, KNS 2320 or 2330 or 2340 or 2410, KNS 2470, KNS 2390 and KNS 3280 or permission of instructor.

KNS 3400  Motor Development Across the Lifespan (3). Fall. Study of changes in human movement over the lifespan from a developmental perspective using contemporary dynamical systems theory. Application of developmentally appropriate practices to clinical practices in the health sciences. Two, one-hour lectures; one, two-hour laboratory. Prerequisite: KNS 2300 and PSYC 1010 or HDFS 1930Q. Extra Fee.

KNS 3500  Motor Learning and Control (3). Spring. Contemporary principles and theories in motor learning and control applied to skill acquisition with emphasis on key factors that influence clinical strategies in the psychomotor domain. Two one-hour lectures, one two-hour laboratory. Prerequisites: PSYC 1010 or HDFS 1930Q and KNS 2300. Extra fee.

KNS 3550  Socio-cultural and Psychological Foundations of Teaching Physical Education (3). Fall, Summer on demand. Socio-cultural and psychological foundations of physical education curriculum and instruction. Three, 1-hour lectures.

KNS 3560  Historical, Philosophical and Curricular Foundations of Physical Education (3). Spring, Summer on demand. The study of history, philosophy, and curriculum as related to physical education. Three lecture hours. Prerequisite: KNS 2470.

KNS 3600  Exercise Physiology (3). 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. Extra Fee.

KNS 3610  Applied Exercise Physiology (3). 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  Biomechanics of Human Movement (3). 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. Extra fee.

KNS 3870  Practicum (1-5). 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  Workshop on Current Topics in Kinesiology (1-3). On demand. Intensive study of selected topics in kinesiology. May be repeated up to 12 hours if topics are different.

KNS 4000  Facilitating Movement Change in a Tutorial Setting (3). 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  Measurement and Evaluation of Human Movement (3). 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  Exercise Testing and Prescription (3). Fall, Spring. Selection, design, and application of exercise testing and exercise
prescription principles. Three one-hour lectures. Prerequisite: C or better in KNS 3600. Extra Fee.

KNS 4250 Exercise Testing and Prescription for Special Cases (3). Fall, Spring. Overview of exercise testing, electrocardiogram (EKG) interpretation, and exercise prescription for monitoring exercises 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 Sport Conditioning (3). 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: C or better required in KNS 2300 and C or better in KNS 3600. Extra Fee.

KNS 4320 Teaching-Learning Process in Early-Middle Childhood Physical Education (3). Fall, Spring. Refining the teaching-learning process in early-middle childhood physical education. Two 1-hour lectures/one 2-hour laboratory. Prerequisites: KNS 3120, KNS 2410 and PETE Program Admission. Extra fee.

KNS 4340 Adapted Physical Education (3). Philosophy, concepts, laws, and decisions related to instructional programming of adapted physical education in school settings. Three, 1-hour lectures. Prerequisites: KNS 3330. Approved for distance education.

KNS 4400 Designing and Directing Exercise Programs (3). Spring. Objectives, transactions, and procedures to conduct professional physical activity programs. Three one-hour lectures. Prerequisites: KNS 3870 and KNS 4230.

KNS 4500 Organization and Administration of Exercise Programs (3). Spring, Summer. Theory and practical applications related to the design, renovation, programming, managing, financing, and evaluation of fitness, health, and other physical activity related facilities. Prerequisites: KNS 3870 and KNS 4230.

KNS 4610 Instructor’s Driver Education (3). 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 Advanced Instructor’s Driver Education (3). Summer. Second of two courses required to qualify a student for state certification in driver education; students learn 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 Independent Study in Kinesiology (1-3). 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 The Teaching-Learning Process in Middle Childhood-Young Adult Physical Education (3). Fall, Spring. Refining the teaching-learning process in middle childhood-young adult physical education with particular emphasis on content development. Two 1-hour lectures/one 2-hour laboratory. Prerequisites: KNS 3120 and Admission to PETE Program.

KNS 4810 Senior Project (4). 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 4860 Adapted Physical Education Field Experience and Seminar (3). School-based field experience (2-hours) and web-centric seminar (1-hour) covering issues related to the field experience; current ideas and issues for professional development; and candidate dispositions and profile in relation to Ohio APE Endorsement standards. Petitioning and approval required of each student before registration. Prerequisite: KNS 3870 or permission of instructor.

KNS 4870 Practicum (1-5). 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 Exercise Science Internship (15). 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 Early Childhood - Young Adult Physical Education Internship (15). Fall, Spring. Physical education teaching on full-day basis under supervision in early childhood - Young adult schools. Students would teach 8 weeks at the elementary level and 8 weeks at the secondary level. Prerequisites: full PETE program acceptance; 2.5 GPA, 90 semester hours; PSYC 1010, ED 3020; KNS 4320; KNS 4720. Passing score on Ohio Assessment for Educators - Physical Education Content Knowledge. Must co-register with KNS 4930. Extra Fee.

KNS 4921 Early Childhood - Young Adult Physical Education Internship for PE and Health Licensure (9). Fall, Spring. Student teaching on a full-day basis with supervision in early childhood - young adult schools.
Students teach 7 weeks at the elementary level and teach at the secondary level 6 weeks health education and 3 weeks combined PE/health (minimum). Prerequisites: both PETE and Health program acceptance; 2.5 GPA; 90 semester hours; PSYC 1010, EDFI 3020, KNS 4320, KNS 4720, HEAL 4300, HEAL 4350. Passing score on Praxis II Test - Physical Education Content Knowledge. Must be taken concurrently with KNS 4930; HEAL 4920. Extra Fee.

KNS 4930 Physical Education Internship Seminar (1). Fall, Spring. The seminar is designed to complement the Physical Education Internship. Various assignments and speaker presentations assist students in developing their professional portfolio, attitudes, and reflections of teaching behaviors essential for beginning teachers. Must co-register with KNS 4920.

KNS 4970 Middle Childhood-Young Adult Physical Education Internship (1-12). 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.

LAT - Latin

LAT 1010 Elementary Latin I (4). 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 Elementary Latin II (4). 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 Intermediate Latin I (3). Fall. Grammatical review and reading of ancient Latin texts. Prerequisite: LAT 1020 or two years of Latin in high school. Applicable to the BG Perspective (general education) humanities and arts and international perspective requirements.

LAT 2020 Intermediate Latin II (3). 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 Latin Prose Composition I (3). Developing increased ability to understand structural peculiarities of classical Latin. Prerequisite: LAT 2020.

LAT 3520 Latin Prose Composition II (3). Developing increased ability to understand structural peculiarities of classical Latin. Prerequisite: LAT 3510.

LAT 3610 Latin Literature I (3). Fall. Grammatical review and advanced reading of ancient Latin texts. Prerequisite: LAT 2020 or consent of section leader and instructor.

LAT 3620 Latin Literature II (3). Spring. Grammatical review and advanced reading of ancient Latin texts. Prerequisite: LAT 2020 or consent of section leader and instructor.


LAT 4700 Readings in Latin Literature (1-3). 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.

LEG 1900 Ethics and Responsibility in Business (3). 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.

LEG 3010 Legal Environment of Business (3). 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. Approved for distance education.

LEG 3040 Law for Entrepreneurs (3). 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.

LEG 3050 Comparative Legal Philosophy (3). 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.

LEG 4010 Business Law I (4). 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.

LEG 4020 Business Law II (4). Spring. Business law including accountant legal liability, agency, partnerships, corporations, securities, property, bailments, trusts and wills, insurance, and professional
LEGS 3010 or LEGS 4010. Recommended for accounting students planning on taking the CPA examination.

LEGS 4060 International Business Transactions (3). 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 Business and the Constitution (3). An examination of Constitutional provisions and issues that affect U.S. businesses such as the Commerce Clause, corporate speech, due process, and the powers of the federal and state government to regulate business. Emphasis on contemporary business/Constitutional issues. Prerequisite: junior standing.

LEGS 4190 Labor Law (3). 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 work place, (f) employment at will and for term, and (g) wrongful discharge. Prerequisite: junior standing.

LEGS 4230 Computer and Technology Law (3). 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 Health Care Law (3). 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 Employment Law (3). Discussion of laws focusing on the prohibition of discrimination and harassment on the basis of race, color, national origin, sex, religion, age and disability, and veterans; and on wage and salary discrimination using equal pay and comparable worth analysis. Prerequisite: junior standing. Approved for distance education.

LEGS 4310 Environmental Law (3). 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 Hospitality Law (3). 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 Legal Research and Writing (3). 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 Studies in Business Law (1-3). 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.

LIB 1120 Living in the Information Age (3). Explores the effects of the information explosion on the individual and society. Introduces basic literacy skills, such as locating and evaluating information.

LIB 2210 Research in the Electronic Library I (1). 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 Research in the Electronic Library II (2). Fundamental concepts of information and electronic access to information resources, search strategies, electronic database features, scholarly communication, societal implications of electronic information.

LIB 2250 Information Seeking and Management in Contemporary Society (3). 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.

MATH – Mathematics & Statistics

MATH 90 Elementary Algebra (3). Fall, Spring. 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 Credit. Extra Fee.

MATH 95 Intermediate Algebra (3). 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 Credit. Extra Fee.

MATH 1150 Introduction to Statistics (3). Fall, Spring, Summer. Description of data, binomial and
normal distributions, estimation and testing hypotheses for means and proportions. Prerequisites: Two years of high school algebra, one year of geometry and a satisfactory placement exam score.

**MATH 1160 Introduction to Statistics II (3).** 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 1180 Mathematical Ways of Thinking (3).** Fall, Spring. Development of critical thinking and problem-solving skills through mathematical modes of thinking and active exploration of such topics as notions of infinity, the golden rectangle, symmetry, uncertainty, fractals, knots, and musical ratios. Prerequisites: Two years of high school algebra, one year geometry and a satisfactory placement score.

**MATH 1200 College Algebra (5).** 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 1200, MATH 1210, 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 College Algebra II (3).** 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 1280, or MATH 1300. No more than 6 credit hours in MATH 1200, MATH 1210, and MATH 1220 may be counted toward graduation. Prerequisites: Two years of high school algebra, one year geometry and a satisfactory placement exam score, or grade of C or higher in MATH 1210, or grade of D in MATH 1200.

**MATH 1230 Mathematics for Architecture/Construct (5).** Fall, Spring. Units and unit conversions; geometry; trigonometry of angles; laws of cosines and sines; solving triangles; vectors; analytic geometry; 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 Basic Calculus (5).** 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. Prerequisites: 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 Precalculus Mathematics (5).** 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 Trigonometry (2).** 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 Accelerated Precalculus Mathematics (3).** Fall, Spring. Theory of equations and inequalities, coordinate geometry, complex numbers, and theory and applications of polynomial, rational, exponential, logarithmic, and trigonometric functions. An accelerated course compared to its counterpart, MATH 1280. Not to be taken if credit for MATH 1280 or MATH 1290 has already been received. Prerequisites: Two years of high school algebra, one year of high school geometry and a satisfactory placement exam score, or completion of MATH 1200 or MATH 1220 with a grade of C or higher.

**MATH 1310 Calculus and Analytic Geometry (5).** 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 Calculus and Analytic Geometry IA (3). 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 Calculus and Analytic Geometry IB (3). 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 Mathematics for Early Childhood Teachers (3). 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 2140 Mathematical Reasoning for Educators (3). Fall, Spring. This course uses a problem-solving framework to investigate mathematical reasoning and sense making, statistical literacy, number systems and properties of numbers, proportional reasoning, algebraic thinking, and set theory. Open only to education majors. Prerequisite: satisfactory score on MATH 2140 placement test or grade of C or better in MATH 90.

MATH 2150 Number Systems for Middle School Teachers (3). Fall, Spring. This course is an investigation into number systems encountered by middle school students. The course provides an in-depth study of integers, rational numbers, irrational numbers, decimals, and real numbers including properties of numbers, number theory, proportional reasoning, percents and set theory. Open only to education majors. Prerequisite: satisfactory score on MATH 2150 placement test or grade of C or better in MATH 90.


MATH 2220 Discrete Mathematics (3). 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. Prerequisites: C or better in MATH 1260, MATH 1280, MATH 1300, MATH 1310, or MATH 1350. The web-based section is open only to Computer Science students.

MATH 2320 Calculus and Analytic Geometry II (5). 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 Calculus and Analytic Geometry III (3). 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 Vector Fields (1). 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 Calculus and Analytic Geometry III with Vector Fields (4). 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 2330. Prerequisite: grade of C or higher in MATH 2320.

MATH 2450 Statistics for Middle School Teachers (3). 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 2450H Statistics for Middle School Teachers (3). 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 Fundamentals of Statistics (3). 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 Honors Course in Mathematics (1). Series of lectures by various department members.
surveying major areas of mathematics. To be taken after completion of MATH 1310. May be repeated for credit, up to a total of 3 hours. Prerequisite: invitation of department.

**MATH 3130 Elementary Mathematical Logic (3).** 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 Discrete Mathematics (3).** Fall, Spring, 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 3280 Mathematical Foundations and Techniques (3).** Spring. This course is an introduction to mathematical proofs and proof techniques, involving topics such as logic, sets, relations, functions, induction, sequences, series, metric spaces, graph theory. Prerequisite: C or better in MATH 2320 or consent of instructor.

**MATH 3320 Elementary Linear Algebra (3).** Fall, Spring, Summer. 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 Differential Equations (3).** 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 Fundamental Concepts of Modern Algebra (3).** Fall, Spring. Elementary topics from rings, fields and groups: divisibility properties of the integers; 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 Principles of Probability and Statistics (3).** Fall, Spring. Summary and display of data; basic probability concepts; discrete distributions; continuous distributions; computer-aided probabilistic and statistical modelling 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 Introduction to Statistical Practice (3).** 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 Honors Course in Mathematics (1).** 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 Topics in Mathematics (3).** Selected topics in mathematics not included in existing courses. May be taken twice for credit. Prerequisite: consent of instructor.

**MATH 4010 Number Theory (3).** Fall odd years. Divisibility, prime numbers, linear congruences, Chinese Remainder Theorem, quadratic residues, quadratic reciprocity law, numerical functions, factorization of integers, Fibonacci numbers, elementary diophantine equations and applications. Prerequisite: C or better in MATH 3220 and MATH 3320, or consent of instructor.

**MATH 4020 Modern Geometry (3).** 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 Modern Algebra I (3).** 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 higher in MATH 2330 or MATH 2350, and C or higher in MATH 3220 and MATH 3320, or consent of instructor.

**MATH 4040 Modern Algebra II (3).** 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 History of Mathematics (3).** Fall, Spring. History of Mathematics through Calculus. Prerequisite or corequisite: MATH 3320.

**MATH 4140 Algebraic Thinking and Misconceptions (3).** Fall, Summer. Patterns, functions, operations on functions, analysis of word problems, slope, classification of functions, common misconceptions, applications in other mathematical domains and other disciplines. Investigations in the research of algebraic thinking. Open only to middle childhood education majors or consent of instructor. Prerequisites: C or better in MATH 2150 or MATH 1310.

**MATH 4150 Advanced Mathematical Topics for Middle School Teachers (3).** Fall, Spring. Topics include 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 one of
MATH 2220, MATH 3220, or MATH 4140, and in one of MATH 2450, MATH 2470, or MATH 3410, or consent of instructor.

MATH 4170 Advanced Mathematics Topics for Early Adulthood Teachers (3). 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 or MATH 3390. Corequisite: EDTL 4740 or consent of instructor.

MATH 4210 Foundations of Mathematics (3). 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 Theory of Interest (3). 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 Actuarial Mathematics I (3). 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 Actuarial Mathematics II (3). 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 4320 Linear Algebra with Applications (3). 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 3320 or consent of instructor.

MATH 4340 Advanced Calculus (3). Fall of even years. Advanced topics from the differential and integral calculus of functions of several variables including: curvilinear coordinates, Jacobian matrices, Lagrange multipliers, gradient fields, divergence and curl of a vector field. Prerequisites: C or higher in MATH 2330 or MATH 2350, and C or higher in MATH 3320, or consent of instructor.

MATH 4370 Qualitative Theory of Differential Equations (3). 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 4390 Boundary Value Problems of Differential Equations (3). Boundary value problems, Sturm-Liouville theory, singular boundary conditions, Fourier series, partial differential equations of mathematical physics, e.g., heat, wave, and Laplace's equation in one and several dimensions. Applications. Prerequisite: C or better in MATH 3370.

MATH 4410 Probability and Statistics I (3). Fall, Summer. Axiomatic probability; conditional probability; random variables/vectors; distribution functions; expectations; moment-generating functions; special distributions; 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 4420 Probability and Statistics II (3). Spring. Statistical models; point estimation; interval estimation; testing statistical hypotheses; analysis of discrete data; nonparametric methods. Prerequisite: C or better in MATH 4410.

MATH 4450 Applied Probability (3). Spring of odd years. Probability models for applications, finite Markov chains, queueing systems, Poisson process, applications to genetics, diffusion, computer systems. Prerequisites: C or better in MATH 3320 and MATH 4410.

MATH 4470 Exploratory Data Analysis (3). Fall odd years. Introduction to modern techniques in data analysis, including stem-and-leaves, box plots, resistant lines, smoothing and median polish. Prerequisite: C or better in MATH 2470, MATH 3410, or MATH 4410 or consent of instructor.

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

MATH 4610 Introduction to Complex Analysis (3). 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 2330 or MATH 2350, and C or higher in MATH 3320, or consent of instructor.
MATH 4650  Introduction to Real Analysis I (3). 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 2330 or MATH 2350, and C or higher in MATH 3220 and MATH 3320, or consent of instructor.

MATH 4660  Introduction to Real Analysis II (3). 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.

MATH 4700  Readings in Mathematics (1-3). 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  Internship (1-4). 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  Honors Course in Mathematics (1). 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.

MATS – Materials Science

MATS 1000  Materials in the Service of Society (3). 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 BG Perspective (general education) natural sciences requirement. Extra fee.

MATS 4010  Survey of Materials Science I (3). 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  Survey of Materials Science II (3). 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  Independent Study in Materials Science (1-3). 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.

MC – Media and Communication

MC 1930Q  Media and Communication Literacy (3). Fall. This media and communication literacy course offers a critical perspective to access, analyze, and evaluate media and non-mediated texts, representations, and practices. Special attention will be paid to important convergence aspects of contemporary communication in which knowledge and information are transmitted across myriad multi-and cross-platforms. Students will learn about a variety of new and traditional media contents, including social media, film, television, video games, news, etc. Open to non-majors. Credit not given for both MC 1930Q and JOUR 1000 or TCOM 1030. Prerequisite: Open only to Freshman and Sophomore students.

MFG – Manufacturing Technology

MFG 1260  Basic Metrology (1). Linear measurement instruments, gauge blocks, dial indicators, angular measurement, calibration. One hour lecture.

MFG 2250  Plastic Materials and Processes (3). 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 112 or QS 2650 or permission by instructor. Offered at Firelands only.

MFG 2270  Quality Assurance (3). 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  Metallic Material and Processes II (3). 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 2900  Problems in Manufacturing Technology (1-3). 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.

**MGMT - Management**

**MGMT 3000 Integrated Operations and Supply Chain Management (3).**
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.

**MGMT 3040 Entrepreneurial Leadership and Teams (3).**
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 Principles of Organization and Management (3).**
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. Approved for distance education.

**MGMT 3300 Supply Management (3).** 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). Approved for distance education.

**MGMT 3380 Introduction to Supply Chain Management (3).** Supply chain data analysis and problem solving using spreadsheet applications to support decision making in a supply chain context. Specific applications include quality improvement tools, demand forecasting and inventory systems. Prerequisites: Prior credit or concurrent registration in MGMT 3000, and MIS 2000

**MGMT 3600 Organizational Theory and Behavior (3).** 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. Approved for distance education.

**MGMT 3610 Human Resource Management (3).** 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. Approved for distance education.

**MGMT 4110 Quality Management and Lean Tools (3).** 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: STAT 2110 and C or better in MGMT 3000 is required. Credit cannot be earned in both this course and MBA 5410.

**MGMT 4420 Logistics Management for Supply Chains (3).** 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. Credit not allowed in both this course and MBA 5420.

**MGMT 4450 Operations Planning and Control (3).** This course examines the decision-making processes necessary to effectively plan for the operation of a manufacturing system. 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. Credit can not be earned in both this course and MBA 5450. Prerequisites: C or better in MGMT 3000.

**MGMT 4470 Strategic Sourcing (3).** Analyze purchase price, price risk, and costs, apply total cost ownership models, and plan for and conduct purchasing negotiations. Supplier relationships, contract management, and legal considerations in supply management are also covered. Credit cannot be received in both this course and MBA 5470. Prerequisite: C or better in MGMT 3000.

**MGMT 4490 Supply Chain Strategy (3).** 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 3300, MGMT 4200 and admission to the Supply Chain Management specialization.

**MGMT 4540 Managing the Employment Process (3).** 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.
Management Information Systems (MIS)

MGMT 4560 Managing Productivity, Employee Involvement and Reward Systems (3). Spring. Focus on productivity improvement strategies, employee involvement, work redesign and reward and incentive systems. Prerequisite: MGMT 3050 or MGMT 3600.

MGMT 4650 Managing Change in Organizations (3). 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. Approved for distance education. Check with the Department of Management for required technologies.

MGMT 4700 Leading for Success (3). 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: MGMT 3050 or MGMT 3600. Approved for distance education. Check with the Department of Management for required technologies.

MGMT 4910 Studies in Management (1-3). 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.

MIS - Management Information Systems

MIS 2000 Introduction to Management Information Systems (3). 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 Windows Application Design (3). 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 1010.


MIS 4170 Microcomputer Hardware and Software Management (3). 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 Business Data Communication and Distributed Processing (3). Basic concepts, security, and design of business data communication systems and distributed processing of business information systems. Prerequisite: MIS 2000.

MIS 4220 Information Systems Security (3). 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 Database Management (3). Logical database design and effective implementation, including hierarchical, network and relational models. Prerequisites: MIS 2000.

MIS 4500 Business Process Management with SAP (3). 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 4600 Business Intelligence (3). This course deals with the process of organizing, processing, presenting, and using massive internal and external information to facilitate strategic business decision-making. It covers knowledge areas of data warehouse, on-line analytical processing, data visualization & presentation, and analysis, design, and development of Business Intelligence systems. Use SAP-BI software. Prerequisite: MIS 4400.

MIS 4710 Systems Analysis and Design (3). Concepts and methods of systems analysis and design; includes a project involving design of a computer-based information system. Prerequisite: MIS 4400.

MIS 4720 Information Systems Project Management (3). 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 Internship Seminar (1-3). 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.
MIS 4910 Studies in Management Information Systems (1-3). 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.

MKT - Marketing

MKT 2010 Introduction to Marketing Management (3). 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. Only for business majors (BSBA or BS Economics). Extra fee.

MKT 3000 Principles of Marketing for Non-Business Majors (3). 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 research. Prerequisite: ECON 2000 or higher. Does not count toward BSBA degree. No credit for students who have received credit for MKT 2010. Extra fee. Approved for Distance Education.

MKT 3020 Consumer Behavior (3). 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 2010 or MKT 3000.

MKT 3200 Marketing Research (3). 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 2010 or MKT 3000.

MKT 3500 Business-to-Business Marketing (3). Fall, Spring. Theory and practice of 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 2010 or MKT 3000.

MKT 4000 Topics in Marketing (1-3). 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 2010 or MKT 3000 may be required.

MKT 4050 Services Marketing (3). 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 2010 or MKT 3000.

MKT 4080 Introduction to Promotion (3). 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 Marketing Communication and Promotion (3). Fall, Spring. Role of promotion in the 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. Credit not allowed for both MKT 4080 and MKT 4100. Prerequisite: C or better in MKT 3020.

MKT 4120 Advertising Management (3). 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 Managing the Service Experience (3). 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; service provider management. Prerequisite: C or better in MKT 4050 and MKT 2010 or MKT 3000.

MKT 4160 Servicescape Design (3). Fall, Spring. Explores the unique managerial problems and decisions that occur within a service encounter due to the interaction of people
MKT 4210 Advanced Marketing Research (3). 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 2010 or MKT 3000. Recommended: MKT 4050.

MKT 4250 Creativity in Marketing (3). 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 2010 or MKT 3000.

MKT 4300 Retail Management (3). 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 2010 or MKT 3000. Recommended: ACCT 2000 or ACCT 2210.

MKT 4350 Marketing on the Internet (3). 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 2010 or MKT 3000.

MKT 4400 Professional Selling (3). 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 2010 or MKT 3000.

MKT 4420 Sales Management (3). 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 2010 or MKT 3000. Approved for Distance Education.

MKT 4450 Product Planning (3). 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 2010 or MKT 3000.

MKT 4500 Advanced Sales and Sales Planning (3). Intended for students who plan to pursue a career in professional sales, the course covers principles of working with customers, solving problems, account and territory planning, and negotiation skills needed for success in the current competitive environment. Students will develop critical thinking, oral and written communication skills, interpersonal capabilities and decision making skills through active and experiential learning tools. Prerequisite: MKT 4400-Professional Selling.

MKT 4550 International Marketing (3). 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 2010 or MKT 3000.

MKT 4600 Marketing Management (3). 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 Marketing Internship (1-3). 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 Special Studies in Marketing (1-3). 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.

MLS – Medical Laboratory Science

MLS 2010 Orientation to the Professions of Medicine/Medical Technology (2). 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.

MLS 2220 Basic Hematology (3). Study of human blood cell structure and function, methods of blood cell analysis, and changes caused by diseases. Lecture and laboratory.

MLS 3100 Forensic Laboratory Testing (3). 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.

MLS 4020 Orientation and Management (1). 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.

MLS 4030 Applied Clinical Microbiology (9). 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.

MLS 4040 Clinical Serology (2). 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.

MLS 4050 Applied Clinical Hematology (5). 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.

MLS 4060 Applied Clinical Chemistry (11). Seventeen weeks of supervised practical experience in manual and automated methods in clinical chemistry, toxicology and endocrinology in a hospital setting. Prerequisites: admission to hospital-based medical technology program. Duration of this course may vary slightly from hospital to hospital.

MLS 4070 Blood Bank (5). 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.

MLS 4100 Diagnostic Immunology I Laboratory (1). 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.

MLS 4110 Diagnostic Immunology II Laboratory (1). 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.

MLS 4120 Diagnostic Immunology I Laboratory (1). 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.

MLS 4130 Immunohematology I (4). 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. Extra fee.

MLS 4140 Immunohematology II Laboratory (2). 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.

MLS 4150 Immunohematology II (3). 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.

MLS 4160 Clinical Immunology II (2). 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.

MLS 4170 Hematology I (3). 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.

MLS 4220 Hematology Lab I (2). 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.

MLS 4230 Hematology II (2). Mechanism of hemostasis in health and hemorrhagic and thrombotic disease. Blood cell morphology. Lecture and laboratory. Prerequisite: admission to university-based technology program or permission of instructor. Extra fee.

MLS 4240 Hematology III (3). 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.

MLS 4310 Clinical Bacteriology I (3). 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.

**MLS 4320 Clinical Bacteriology I Laboratory (2).** Diagnostic microbiology laboratory procedures. Methods of isolation and identification of clinically significant bacteria. Full-time clinical instruction and practice. Prerequisite: grade of C or better in MEDT 4300 and MEDT 4320 continued; emphasis on clinical application and identification of clinically significant bacteria. Extra fee.

**MLS 4330 Clinical Bacteriology II (4).** MEDT 4310 and MEDT 4320 continued; emphasis on clinical application and identification of clinically significant bacteria. Full-time clinical instruction and practice. Prerequisite: grade of C or better in MEDT 4310, MEDT 4320, MEDT 4340 or equivalent, MEDT 4350 and MEDT 4360. Extra fee. Duration of this course may vary slightly from hospital to hospital.

**MLS 4340 Clinical Parasitology (3).** Parasitic diseases of man; methods of detection, isolation and identification of clinically significant human parasites. Lecture and lab. Extra fee.

**MLS 4350 Clinical Mycology (2).** Clinically significant fungi; methods of detection, isolation and identification. Lecture and lab. Prerequisite: BIOL 3130 or equivalent or permission of instructor. Extra fee.

**MLS 4360 Clinical Virology (1).** 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. Extra fee.

**MLS 4420 Clinical Chemistry I Laboratory (2).** 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.

**MLS 4430 Clinical Chemistry II (5).** 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. Direction of this course may vary slightly from hospital to hospital. Extra fee.

**MLS 4510 Analysis of Body Fluids (2).** 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.

**MLS 4600 Medical Laboratory Technician Bridge Course (1-3).** 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. Extra fee.

**MLS 4650 Laboratory Management and Education (1).** 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. Extra fee. Duration of this course may vary slightly from hospital to hospital.

**MLS 4700 Research and Special Topics (1-3).** Research techniques, literature search, experimental design, critical reading. Paper required on selected problem. Prerequisite: permission of instructor. Variable credit, one to three semester hours. May be repeated to 3 hours.

**MLS 4800 Introduction to Clinical Research (1-3).** 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.

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**MSL – Military Science & Leadership**

**MSL 1000 Lifetime Leadership Skills (2).** 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 officerliness. No military obligation or prerequisites. Extra fee.

**MSL 1010 ROTC and the National Defense Organization (2).** 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 Leadership/Officership (2).** 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  Military Tactics (2).
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
Professionalism/Leadership (3).
Professionalism and leadership required of the U.S. Army Officer; application of leadership principles and styles through case studies and role-playing exercises. Participation in leadership labs, physical training program and field training exercises required. Prerequisites: department permission and prerequisite 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  Small Unit Operations (3). 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  Unit Management and Officer Development (3). 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  Military Law and Leadership (3). 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  Studies in Military Science (1-3). 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.

MUC 1010  Exploring Music (3).
Fall, Spring, Summer. Explores different categories of music (classical, world, popular) and various genres in their social contexts. Topics include, but are not limited to: music and ethnicity, music and gender, music and spirituality, music and love. Directed listening focuses on how musical sounds create meaning in different historical periods and cultures. Applicable to the BG Perspective (general education) humanities and arts requirement.

MUC 1100  Elements of Music (3).
Designed to lead students to a mastery of rudiments of written theory and to provide introductory work in the development of related listening skills. Approved for Distance Education.

MUC 1130  Basic Musicianship (2).
Fall. 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.

MUC 1150  Accelerated Fundamentals of Music (1). 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 MUC 1410 and MUC 1510.

MUC 1160  Fundamentals of Composition (2).
Fall, Spring. Basic compositional techniques for students not yet admitted to baccalaureate program in music composition. May be repeated.

MUC 1250  Exploring Music of World Cultures (3).
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.

MUC 1410  Aural Skills I (2).
Fall, Spring. Basic skills in sightsinging: rhythmic, melodic and harmonic dictation of diatonic and triadic materials. Prerequisite: middle or high score on placement exam or MUC 1100 or MUC 1140. Should be taken concurrently with MUC 1510.

MUC 1420  Aural Skills II (2).
Fall, Spring, Summer. Sightsinging and dictation of more difficult diatonic and triadic materials. Prerequisite: MUC 1410 and for those with a middle score on the placement exam, MUC 1150. Should be taken concurrently with MUC 1520.

MUC 1510  Theory I (2).
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 MUC 1410 and, for those with middle score on placement exam, MUC 1150.

MUC 1520  Theory II (2).
Spring. Knowledge and skills in diatonic and chromatic harmony, melodic organization, part forms, with examples from a variety of music literature. Prerequisite: MUC 1510. Should be taken concurrently with MUC 1420.
MUCT 1920Q  Inquiry in Humanities and Creative Arts (3).
Investigates how music communicates and embodies social, historical, and personal ideas, beliefs, and values. Emphasis on how musical sounds create meaning in various contexts. Prerequisite: Open only to freshman students.

MUCT 2100  Jazz Aural Skills (2).
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  Composition (1-4).
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  Masterpieces of Music (2). 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 2360  Area Studies in World Music (3). Fall, Spring. The study of world music cultures such as those in Africa, Asia, the Americas, the Middle East, the Pacific Basin, Eastern Europe, etc., with emphasis on music’s relation to distinct cultural, social, and political contexts. Applicable to the BG Perspective (general education) humanities and arts and international perspective requirements.

MUCT 2370  Jazz (3). Summer. 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. Approved for Distance Education.

MUCT 2410  Aural Skills III (2). Fall, Spring, Summer. Intermediate skills in sight-singing; rhythmic, melodic and harmonic dictation of chromatic material including seventh chords. Should be taken concurrently with MUCT 2510. Prerequisite: MUCT 1420.

MUCT 2420  Aural Skills IV (2). 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  Theory III (2). 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  Theory IV (2). Spring. Twentieth-century techniques and styles. Prerequisite: MUCT 2510. Should be taken concurrently with MUCT 2420.

MUCT 2610  Music History I (3). 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  Music History II (2). 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  Keyboard Harmony I (2). Fall even years. Use of keyboard skills related to score reading, transposition, extemporization and accompanying.

MUCT 3090  Keyboard Harmony II (2). Spring odd years. Continuation of keyboard skills developed in MUCT 3080. Prerequisite: MUCT 3080.

MUCT 3150  Orchestration (2). 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  Band Scoring (2). Fall, Spring. Scoring for band instruments, from small ensembles to concert band. Prerequisite: MUCT 2510.

MUCT 3250  Choral Arranging (2). Spring. Text analysis; arranging for men’s, treble, and mixed voices; A Cappella and accompanied ensemble arranging techniques. Prerequisite: MUCT 2510.


MUCT 3610  Music History III (2). Fall. Study of the history, social setting and style of Western art music in the twentieth century. Prerequisites: MUCT 2520, MUCT 2620.

MUCT 3950  Workshop on Current Topics (1-4). 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  Counterpoint I (2). Fall odd years. 16th-century counterpoint. Prerequisites: MUCT 2510, MUCT 2610.

MUCT 4040  Counterpoint II (2). 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  Problems in Music History (3). Fall, Spring. Research of topics and problems in music history. Prerequisite: consent of instructor. May be repeated to 12 hours.
MUET 4070 Performance Practice (2). Fall even years. Performance practice in music, improvisation, ornamentation, accompaniment, instrumentation, rhythm and tempo. Prerequisite: MUET 2620.

MUET 4080 Chamber Music Literature (2). Fall odd years. Study of selected major chamber works of various periods. Prerequisite: MUET 2520, MUET 2620.

MUET 4090 Symphonic Literature (2). Fall even years. Study of major symphonic works from 1750 to modern period. Prerequisites: MUET 2520, MUET 2620.

MUET 4100 Contemporary Music Pro-Seminar (2). Fall. Musical styles and techniques of 20th century. Compositional and analytical approach, considering various influences of past. May be repeated to eight hours. Prerequisite: MUET 3610.

MUET 4120 Opera Literature (2). Fall odd years. Study of major operatic works of various periods. Prerequisite: MUET 2620.

MUET 4160 Composition (1-4). 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.

MUET 4200 Introduction to Ethnomusicology (2). Spring even years. Topics and techniques in ethnomusicology. Open to students interested in all music as aspects of culture.

MUET 4210E Afro-Caribbean Ensemble (1). Fall, Spring. Elective (small) ensemble. May be repeated.

MUET 4220E Balinese Gamelan (1). Fall, Spring. Elective (small) ensemble. May be repeated.

MUET 4230E Early Music Ensemble (Instrumental) (1). Fall, Spring. Elective (small) ensemble. May be repeated.

MUET 4240E Early Music Ensemble (Vocal) (1). Fall, Spring. Elective (small) ensemble. May be repeated.

MUET 4250E New Music Ensemble (1). Fall, Spring. Elective (small) ensemble. May be repeated.


MUET 4360 Audio Recording Techniques (2). Fall, Spring. Concert and studio multi-track recording methods culminating with an actual recording session. Students will gain some hands-on experience. Extra fee.


MUET 4440 Music Technology I (3). 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.

MUET 4450 Music Technology II (3). 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: MUET 4440 or consent of instructor. Extra fee.

MUET 4460 Music Technology III (3). 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: MUET 4450 or consent of instructor. Extra fee.

MUET 4470 Music Technology IV (3). 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: MUET 4460 or consent of instructor. Extra fee.

MUET 4700 Reading and Research (2-4). 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.

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MUET – Music Education

MUET 1250 Percussion Class (1). Fall, Spring. Prerequisite: MUET 1450. (Elective).

MUET 1300 Trumpet-French Horn Class (1). Fall, Spring, Alternate summers.

MUET 1360 Trombone-Euphonium-Tuba Class (1). Fall, Spring, Alternate summers.

MUET 1400 Clarinet-Saxophone Class (1). Fall, Spring, Alternate summers.

MUET 1450 Flute-Percussion Class (1). Fall, Spring.

MUET 1460 Oboe-Bassoon Class (1). Fall, Spring, Alternate summers.

MUET 1470 Bassoon Reed Class (1). Spring. (Elective).

MUET 1500 Class Piano (1). Fall, Spring. Class piano instruction for beginners and those with minimal keyboard experience. Placement into MUET 1500 and MUET 1510 is determined on the basis of an audition. Only open for credit to music majors and minors. Grade of C of
better required for admittance into
MUED 1510. Extra fee.

**MUED 1540 Class Piano (1).** 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
professional group piano classes;
includes Piano Proficiency I. Extra fee.

**MUED 1560 Beginning Piano for
the Non-music Major I (2).** 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 1700 Voice Class (1).** 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 String Class (2).** Fall, Spring.

**MUED 1950 Guitar Class (1).** Fall, Spring, Summer. (MUED majors and
minors only.)

**MUED 2220 Global Music Traditions (2).** 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 BG Perspective (general
education) humanities and arts and
international perspective
requirements.

**MUED 2400 Introductory Music
Field Experience (3).** 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 hours. Required of
all sophomores.

**MUED 2450 Music Teaching Skills
for the Middle Childhood Teacher
(2).** 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 Music Education for
Early Childhood (2).** 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 Class Piano:
Instrumental Harmonization and
Score Reading (Proficiency II) (2).** 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 Class Piano:
Instrumental Harmonization and
Score Reading II (1).** 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 Class Piano: Choral
Harmonization and Score Reading I
(2).** 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 Class Piano:
Accompanying as a Teaching Tool I
(1).** 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 Class Piano: Advanced
Harmonization, Score Reading and
Accompanying (Proficiency II and
III) (2).** 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 Elementary Music
Methods (2).** Fall, Spring.
Concentrated study of organization,
administration and teaching of music
in the elementary general music
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  General Junior High Methods (3).** 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  Band/Orchestra Methods (2).** 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  Band Field Experience (2).** Fall, Spring.
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 or Option 2 (by permission), assigned to an area school, 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  Choral Methods (2).** 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  Choral Field Experience (2).** 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.

**MUED 3460  Classroom Methods (2).** 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  Classroom Field Experience (2).** 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.

**MUED 3480  Orchestra/Band Methods (2).** 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  Orchestra/Band Field Experience (1-2).** 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  Choral Methods for Instrumental and Classroom Music Education Majors (2).** 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  Workshop on Current Topics (1-4).** On demand. Intensive
eductional 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**  
*Beginning Wind and Percussion Instrument Repair (1)*  
Spring. Basic practices and techniques of instrument repair. Extra fee.

**MUED 4510**  
*Advanced Methods Classroom Music (2)*. 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**  
*Marching Band Techniques (2)*. Spring. Techniques in planning, charting and rehearsing marching band shows and administering public school marching bands. Prerequisite: junior standing.

**MUED 4590**  

**MUED 4600**  
*Reading in the Content Area (3)*. 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**  
*Readings in Music Education (1-3)*. Fall, Spring. Special topics in music education. Admittance by consent of instructor. May be repeated.

**MUED 4910**  
*Teaching Practicum (1-2)*. Fall, Spring. Supervised individualized teaching experience in area of specialization. Prerequisite: consent of instructor. Graded S/U.

**MUED 4970**  

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**MUS – General Music**

**MUS 99**  
*Recital Attendance (0)*. 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**  
*Beginning Guitar Non-Majors (2)*. Fall, Spring. Introduction to the guitar, fundamentals of technique and music notation reading. Open to non-music majors only.

**MUS 1910**  
*Intermediate Guitar Non-Majors (2)*. Fall, Spring. MUS 1900 continued. Open to non-music majors only. Prerequisites: MUS 1900 or previous experience and consent of instructor.

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**MUSP – Music Performance Studies**

**MUSP 1600**  
*Sight Reading I (1)*. Fall. Development of visual comprehension of intervallic patterns and basic rhythmic patterns for the keyboard player. Prerequisite: consent of instructor.

**MUSP 1950**  
*Pedal Harp Class (1)*. On demand. Prerequisite: permission of instructor. Extra fee.

**MUSP 2100**  
*Piano Repertoire I (3)*. Fall alternate years. Literature from early keyboard music through classical. Prerequisite: consent of instructor.

**MUSP 2110**  
*Piano Repertoire II (3)*. Spring alternate years. Literature from Romantic era to present. Prerequisite: consent of instructor.

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**MUSP 2130**  
*Jazz Improvisation and Repertoire II (2)*. 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**  
*Singer's Diction I (2)*. 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**  
*Organ Repertoire I (2)*. On demand. Literature from 1325 to the present, excluding the music of J.S. Bach. Prerequisite: consent of instructor.

**MUSP 2160**  
*Organ Repertoire II (2)*. On demand. Organ music of J.S. Bach. Prerequisite: consent of instructor.

**MUSP 2180**  
*Jazz Piano Fundamentals (3)*. 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: MUSP 1510 and either a high score on placement exam or MUCT 1100, MUCT 1140 or MUCT 1150.

**MUSP 2190**  
*Jazz Pedagogy (2)*. 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**  
*Applied Percussion (1-4)*. Fall, Spring, Summer. Prerequisite: passage of audition. May be repeated. Extra fee.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUSP 2240</td>
<td>Singer's Diction II (2)</td>
<td>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.</td>
</tr>
<tr>
<td>MUSP 2310</td>
<td>Applied Trumpet (1-4)</td>
<td>Fall, Spring, Summer. Prerequisite: passage of audition. May be repeated. Extra fee.</td>
</tr>
<tr>
<td>MUSP 2320</td>
<td>Applied French Horn (1-4)</td>
<td>Fall, Spring, Summer. Prerequisite: passage of audition. May be repeated. Extra fee.</td>
</tr>
<tr>
<td>MUSP 2330</td>
<td>Applied Trombone (1-4)</td>
<td>Fall, Spring, Summer. Prerequisite: passage of audition. May be repeated. Extra fee.</td>
</tr>
<tr>
<td>MUSP 2340</td>
<td>Applied Euphonium (1-4)</td>
<td>Fall, Spring, Summer. Prerequisite: passage of audition. May be repeated. Extra fee.</td>
</tr>
<tr>
<td>MUSP 2350</td>
<td>Applied Tuba (1-4)</td>
<td>Fall, Spring, Summer. Prerequisite: passage of audition. May be repeated. Extra fee.</td>
</tr>
<tr>
<td>MUSP 2410</td>
<td>Applied Flute (1-4)</td>
<td>Fall, Spring, Summer. Prerequisite: passage of audition. May be repeated. Extra fee.</td>
</tr>
<tr>
<td>MUSP 2420</td>
<td>Applied Oboe (1-4)</td>
<td>Fall, Spring, Summer. Prerequisite: passage of audition. May be repeated. Extra fee.</td>
</tr>
<tr>
<td>MUSP 2430</td>
<td>Applied Clarinet (1-4)</td>
<td>Fall, Spring, Summer. Prerequisite: passage of audition. May be repeated. Extra fee.</td>
</tr>
<tr>
<td>MUSP 2440</td>
<td>Applied Saxophone (1-4)</td>
<td>Fall, Spring, Summer. Prerequisite: passage of audition. May be repeated. Extra fee.</td>
</tr>
<tr>
<td>MUSP 2450</td>
<td>Applied Bassoon (1-4)</td>
<td>Fall, Spring, Summer. Prerequisite: passage of audition. May be repeated. Extra fee.</td>
</tr>
<tr>
<td>MUSP 2460</td>
<td>Applied Jazz Saxophone (1-4)</td>
<td>Fall, Spring. May be repeated. Prerequisite: passage of audition. Extra fee.</td>
</tr>
<tr>
<td>MUSP 2470</td>
<td>Applied Jazz Trumpet (1-4)</td>
<td>Fall, Spring. May be repeated. Prerequisite: passage of audition. Extra fee.</td>
</tr>
<tr>
<td>MUSP 2480</td>
<td>Applied Jazz Trombone (1-4)</td>
<td>Fall, Spring. May be repeated. Prerequisite: passage of audition. Extra fee.</td>
</tr>
<tr>
<td>MUSP 2490</td>
<td>Applied Jazz Voice (1-4)</td>
<td>Fall, Spring, Summer. Prerequisite: passage of audition. May be repeated. Extra Fee.</td>
</tr>
<tr>
<td>MUSP 2550</td>
<td>Applied Jazz Percussion (1-4)</td>
<td>Fall, Spring. May be repeated. Prerequisite: passage of audition. Extra fee.</td>
</tr>
<tr>
<td>MUSP 2560</td>
<td>Applied Jazz Bass (1-4)</td>
<td>Fall, Spring. May be repeated. Prerequisite: passage of audition. Extra fee.</td>
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<tr>
<td>MUSP 2600</td>
<td>Applied Jazz Guitar (1-4)</td>
<td>Fall, Spring. May be repeated. Prerequisite: passage of audition. Extra fee.</td>
</tr>
<tr>
<td>MUSP 2610</td>
<td>Applied Piano (1-4)</td>
<td>Fall, Spring, Summer. (Permission of instructor required for two or more credits.) Prerequisite: passage of audition. May be repeated. Extra fee.</td>
</tr>
<tr>
<td>MUSP 2620</td>
<td>Applied Harpsichord (1-4)</td>
<td>Fall, Spring, Summer. Prerequisite: passage of audition. May be repeated. Extra fee.</td>
</tr>
<tr>
<td>MUSP 2630</td>
<td>Applied Organ (1-4)</td>
<td>Fall, Spring, Summer. Prerequisite: passage of audition. May be repeated. Extra fee.</td>
</tr>
<tr>
<td>MUSP 2640E</td>
<td>Accompanying Techniques I (1)</td>
<td>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.</td>
</tr>
<tr>
<td>MUSP 2690</td>
<td>Applied Jazz Piano (1-4)</td>
<td>Fall, Spring. May be repeated. Prerequisite: passage of audition. Extra fee.</td>
</tr>
<tr>
<td>MUSP 2710</td>
<td>Para-Voice (2)</td>
<td>Fall, Spring. No audition required. May be repeated. Extra fee.</td>
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<tr>
<td>MUSP 2720</td>
<td>Applied Voice (1-4)</td>
<td>Fall, Spring, Summer. Prerequisite: passage of audition. May be repeated. Extra fee.</td>
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<tr>
<td>MUSP 2730</td>
<td>Musical Theatre Group Voice (1)</td>
<td>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.</td>
</tr>
<tr>
<td>MUSP 2750</td>
<td>Introduction to Opera Theater (2)</td>
<td>Spring. Basic terminology and practices of opera theatre.</td>
</tr>
<tr>
<td>MUSP 2810</td>
<td>Applied Violin (1-4)</td>
<td>Fall, Spring, Summer. Prerequisite: passage of audition. May be repeated. Extra fee.</td>
</tr>
<tr>
<td>MUSP 2820</td>
<td>Applied Viola (1-4)</td>
<td>Fall, Spring, Summer. Prerequisite: passage of audition. May be repeated. Extra fee.</td>
</tr>
<tr>
<td>MUSP 2830</td>
<td>Applied Cello (1-4)</td>
<td>Fall, Spring, Summer. Prerequisite: passage of audition. May be repeated. Extra fee.</td>
</tr>
<tr>
<td>MUSP 2840</td>
<td>Applied Double Bass (1-4)</td>
<td>Fall, Spring, Summer. Prerequisite: passage of audition. May be repeated. Extra fee.</td>
</tr>
<tr>
<td>MUSP 2850</td>
<td>Applied Harp (1-4)</td>
<td>Fall, Spring, Summer. Prerequisite: passage of audition. May be repeated. Extra fee.</td>
</tr>
<tr>
<td>MUSP 2860</td>
<td>Applied Classical Guitar (1-4)</td>
<td>Fall, Spring, Summer.</td>
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</tbody>
</table>
Prerequisite: passage of audition. May be repeated. Extra fee.

**MUSP 3050 Conducting I (2).** 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 Conducting II (2).** 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 Vocal Repertoire for the Young Singer (1).** 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 Vocal Repertoire I (2).** 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 Vocal Repertoire II (2).** Spring alternate years. 19th and 20th century French and German art song literature. Prerequisite: consent of instructor.

**MUSP 3130 Jazz Arranging Analysis I (3).** 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 Jazz Arranging Analysis II (3).** 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 Brass (1).** Fall, Spring. Elective (small) ensemble. May be repeated.

**MUSP 3210E Brass Choir (1).** Spring. Elective (small) ensemble. May be repeated.

**MUSP 3220E Classical Guitar (1).** Fall, Spring. Elective (small) ensemble. May be repeated.

**MUSP 3230E Electric Guitar (1).** Fall, Spring. Elective (small) ensemble. May be repeated.

**MUSP 3240E Euphonium-Tuba (1).** Fall, Spring. Elective (small) ensemble. May be repeated.

**MUSP 3250E Harp (1).** Fall, Spring. Elective (small) ensemble. May be repeated.

**MUSP 3260E Horn Club (1).** Fall, Spring. Elective (small) ensemble. May be repeated.

**MUSP 3270E Jazz (1).** Fall, Spring. Elective (small) ensemble. May be repeated.

**MUSP 3280E Jazz Lab I (1).** Fall, Spring. Major (large) ensemble. May be repeated.

**MUSP 3290E Jazz Lab II (1).** Fall, Spring. Major (large) ensemble. May be repeated.

**MUSP 3300E Mixed Chamber (1).** Fall, Spring. Elective (small) ensemble. May be repeated.

**MUSP 3310E Music Theater Productions (1).** Fall, Spring. Elective (small) ensemble. May be repeated.

**MUSP 3320A Percussion (1).** Fall, Spring. Elective (small) ensemble. May be repeated.

**MUSP 3320E Percussion (1).** Fall, Spring. Elective (small) ensemble. May be repeated.

**MUSP 3330E Piano Accompaniment Practicum (1).** Fall, Spring. Elective (small) ensemble. May be repeated.

**MUSP 3340E Saxophone (1).** Fall, Spring. Elective (small) ensemble. May be repeated.

**MUSP 3350E String (1).** Fall, Spring. Elective (small) ensemble. May be repeated.

**MUSP 3360E Trombone Choir (1).** Fall, Spring. Elective (small) ensemble. May be repeated.

**MUSP 3370E Trumpet Guild (1).** Fall, Spring. Elective (small) ensemble. May be repeated.

**MUSP 3380E Varsity Quartet (1).** Fall, Spring. Elective (small) ensemble. May be repeated.

**MUSP 3390E Vocal Chamber Lab (1).** Fall, Spring. Elective (small) ensemble. May be repeated.

**MUSP 3400E Vocal Jazz Ensemble (1).** Fall, Spring. Elective (small) ensemble. May be repeated.

**MUSP 3410E Woodwind (1).** Fall, Spring. Elective (small) ensemble. May be repeated.

**MUSP 3600 Sight Reading II (1).** Spring (alternate years). Rapid comprehension of complex intervallic and rhythmic patterns; special attention to ensemble precision. Prerequisite: MUSP 1600 or consent of instructor.

**MUSP 3640 Accompanying Techniques II (1).** Spring (Alternate Years). MUSP 2640 continued, using more advanced literature. Prerequisite: MUSP 2640 or consent of instructor.

**MUSP 3670 Piano Pedagogy I (3).** Fall alternate years. Methods, materials and teaching techniques for the beginning pre-college student. Prerequisite: consent of instructor.

**MUSP 3680 Piano Pedagogy II (3).** Spring alternate years. Methods, materials and teaching techniques for the intermediate pre-college student. Prerequisite: consent of instructor.
MUSP 3700 Vocal Pedagogy (3).
Fall (Alternate Years). Basic concepts of vocal pedagogy; methods, materials and terminology. Prerequisite: consent of instructor.

MUSP 3780E Opera Theater (2).
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 Service Playing I (2).
On Demand. Hymn playing, transposition, modulation, improvisation and accompanying at the organ. Prerequisite: consent of instructor.

MUSP 3970 Service Playing II (2).
On demand. MUSP 3960 continued. Prerequisite: MUSP 3960 or consent of instructor.

MUSP 4010 History and Literature of Jazz (2). Spring alternate years. Jazz from African influences through present developments; personalities involved in stylistic change.

MUSP 4020 Jazz Composition (2).
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 Harpsichord Repertoire I (3). On demand. Keyboard literature to 1700 based on original source material and contemporary editions; emphasis on performance. Prerequisite: consent of instructor.

MUSP 4110 Harpsichord Repertoire II (3). On demand. Solo harpsichord literature from 1700 to the present, emphasis on performance. Prerequisite: MUSP 4100 or consent of instructor.

MUSP 4150 Organ Construction (2). On demand. History of the design and construction of the organ. Prerequisite: consent of instructor.

MUSP 4160 Church Music (2). On demand. Music of the major Western churches; plainsong, hymnology, liturgies. Prerequisite: consent of instructor.

MUSP 4210 Applied Percussion (1-4).
Fall, Spring, Summer. Prerequisite: passage of audition. May be repeated. Extra fee.

MUSP 4310 Applied Trumpet (1-4).
Fall, Spring, Summer. Prerequisite: passage of audition. May be repeated. Extra fee.

MUSP 4320 Applied French Horn (1-4).
Fall, Spring, Summer. Prerequisite: passage of audition. May be repeated. Extra fee.

MUSP 4330 Applied Trombone (1-4).
Fall, Spring, Summer. Prerequisite: passage of audition. May be repeated. Extra fee.

MUSP 4420 Applied Oboe (1-4).
Fall, Spring, Summer. May be repeated. Extra fee.

MUSP 4430 Applied Clarinet (1-4).
Fall, Spring. May be repeated. Extra fee.

MUSP 4440 Applied Saxophone (1-4).
Fall, Spring, Summer. Prerequisite: passage of audition. May be repeated. Extra fee.

MUSP 4450 Applied Bassoon (1-4).
Fall, Spring, Summer. Prerequisite: passage of audition. May be repeated. Extra fee.

MUSP 4460 Applied Jazz Saxophone (1-4).
Fall, Spring. May be repeated. Prerequisite: passage of audition. Extra fee.

MUSP 4470 Applied Jazz Trumpet (1-4).
Fall, Spring. May be repeated. Prerequisite: passage of audition. Extra fee.

MUSP 4480 Applied Jazz Trombone (1-4).
Fall, Spring. May be repeated. Prerequisite: passage of audition. Extra fee.

MUSP 4490 Applied Jazz Voice (1-4).
Fall, Spring. May be repeated. Prerequisite: passage of audition. Extra Fee.

MUSP 4500E Athletic Band (1).
Spring. Major (large) ensemble. May be repeated.


MUSP 4530 Brass Pedagogy (2).
Spring alternate years. Teaching techniques and materials for brass instruments. Prerequisite: consent of instructor.

MUSP 4540 Woodwind Pedagogy (2). Spring (Alternate Years). Teaching techniques and materials for woodwind instruments. Prerequisite: consent of instructor.
MUSP 4550  Applied Jazz
Perussion (1-4). Fall, Spring. May be repeated. Prerequisite: passage of audition. Extra fee.

MUSP 4560  Applied Jazz Bass (1-4). Fall, Spring. May be repeated. Prerequisite: passage of audition. Extra fee.

MUSP 4580  String Pedagogy (2).
Spring alternate years. Upper and lower strings. Principles of teaching string instruments. Investigation of related literature and materials. Prerequisite: consent of instructor.

MUSP 4590  Organ Pedagogy (2).
On demand. Principles, techniques and literature applied to various levels of organ study. Prerequisite: consent of instructor.

MUSP 4600  Applied Jazz Guitar (1-4). Fall, Spring. May be repeated. Extra fee.

MUSP 4610  Applied Piano (1-4).
Fall, Spring, Summer. (Permission of instructor required for 2 or more credits hours.) Prerequisite: passage of audition. May be repeated. Extra fee.

MUSP 4620  Applied Harpsichord (1-4). I, II. Prerequisite: passage of audition. May be repeated. Extra fee.

MUSP 4630  Applied Organ (1-4).
Fall, Spring, Summer. Prerequisite: passage of audition. May be repeated. Extra fee.

MUSP 4640  Duo Repertoire (2).
Spring (Alternate Years). 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  Orchestral Audition Repertoire for Cello and String Bass (1).
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  Piano Pedagogy Practicum (1). Fall (Alternate Years). May be repeated. Laboratory in supervised piano teaching, both private and classes. Prerequisite: MUSP 3670 or consent of instructor.

MUSP 4670  Guitar Pedagogy (2).
Fall (Alternate Years). Principles, techniques, and literature applied to various levels of guitar study. Prerequisite: consent of instructor.

MUSP 4680  Orchestral Audition Repertoire for Violin (1).
Study and performance of orchestral excerpts and other audition repertoire. May be repeated for credit. Prerequisite: consent of instructor.

MUSP 4690  Applied Jazz Piano (1-4). Fall, Spring. May be repeated. Prerequisite: passage of audition. Extra fee.

MUSP 4700  Readings, Research and Performance in Music (1-4).
Fall, Spring, Summer. May be repeated. Directed independent readings, research and/or performance related to performance studies. Prerequisites: consent of instructor and department chair. Extra Fee.

MUSP 4710  ParaVoice (2).
Fall, Spring. No audition required. May be repeated. Extra fee.

MUSP 4720  Applied Voice (1-4).
Fall, Spring. Summer. Prerequisite: passage of audition, middle or high school on Music Theory Placement Exam. May be repeated. Extra Fee.

MUSP 4730  Vocal Pedagogy Practicum (1).
On Demand. 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  University Choral Society (1).
Fall, Spring. Major (large) ensemble. May be repeated.

MUSP 4770E  A Cappella Choir (1).
Fall, Spring. Major (large) ensemble. May be repeated.

MUSP 4780E  Collegiate Chorale (2).
Fall, Spring. Major (large) ensemble. May be repeated.

MUSP 4790E  University Women’s Chorus (1).
Fall, Spring. Elective (large) ensemble. May be repeated.

MUSP 4800E  University Men’s Chorus (1).
Fall, Spring. Elective (large) ensemble. May be repeated.

MUSP 4810  Applied Violin (1-4).
Fall, Spring, Summer. Prerequisite: passage of audition. May be repeated. Extra fee.

MUSP 4820  Applied Viola (1-4).
Fall, Spring, Summer. Prerequisite: passage of audition. May be repeated. Extra fee.

MUSP 4830  Applied Cello (1-4).
Fall, Spring, Summer. Prerequisite: passage of audition. May be repeated. Extra fee.

MUSP 4840  Applied Double Bass (1-4).
Fall, Spring, Summer. Prerequisite: passage of audition. May be repeated. Extra fee.

MUSP 4850  Applied Harp (1-4).
Fall, Spring, Summer. May be repeated. Extra fee.

MUSP 4860  Applied Classical Guitar (1-4).
Fall, Spring, Summer. Prerequisite: passage of audition. May be repeated. Extra fee.

MUSP 4870E  Chamber Orchestra (1). Elective (large) ensemble. May be repeated.

MUSP 4880E  Philharmonia (2).
Fall, Spring, Major (large) ensemble. May be repeated.

MUSP 4890E  Senior Recital (2). 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.
NEUR - Neuroscience

NEUR 4500 Neuroscience Seminar (1). 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 Introduction to Neuroscience Research (1-3). 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.

NURS - Nursing

NURS 1000 Orientation to Nursing (1). 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 Nursing Agency I: Concepts (3). Fall, Spring, Summer. Provides foundational knowledge of nursing theory, professional concepts, therapeutic communication and applied interventions. Incorporates laboratory experience with simulated clients. Prerequisite: Admission to major. Corequisites: NURS 3110, NURS 3130, NURS 3170, NURS 3180. Extra fee.

NURS 3060 Holistic Approach to Nursing Interventions (3). Spring. Focus on holistic model integrating technology, scientific knowledge and alternative/complementary caring modalities into basic and advanced practices of nursing. Elective course. Extra fee.

NURS 3070 Nursing Care of the Terminally Ill: Issues in Palliative Care (2). 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. Extra fee.

NURS 3110 Nursing Agency II: Assessment (3). Fall, Spring, Summer. Provides for acquisition of knowledge and development of skill in comprehensive nursing assessment. Prerequisite: Admission to major. Corequisites: NURS 3010, NURS 3130, NURS 3170, NURS 3180. Extra fee.

NURS 3120 Adult Health Nursing I (7). Fall, Spring, Summer. Care of adults with common nursing problems using Orem's Self-Care Deficit Theory of Nursing. Prerequisites: NURS 3010, NURS 3110, NURS 3130, NURS 3170, NURS 3180. Corequisites: NURS 3210, NURS 3630. Extra fee.

NURS 3130 Gerontological Nursing (3). Fall, Spring. 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. Extra fee.


NURS 3620 Women's Health Nursing (5). Fall, Spring, Summer. Provides didactic and clinical opportunities relevant to care of women across lifespan. Various clinical settings used in application of nursing system with a self-care framework. Prerequisites: NURS 3120, NURS 3210, NURS 3630. Extra fee.

NURS 3630 Mental Health Nursing (5). Fall, Spring, Summer. 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 3010, NURS 3110, NURS 3130, NURS 3170, NURS 3180. Corequisites: NURS 3210, NURS 3120. Extra fee.

NURS 3640 Parent-Child Nursing (5). Fall, Spring, Summer. Nursing care of infants, children, and adolescents within families and groups using Orem's Self Care Deficit Theory of Nursing. Clinical experiences in wellness, acute, and chronic care settings. Prerequisites: NURS 3120, NURS 3210, NURS 3630. Extra fee.

NURS 4010 Community Health Nursing (5). Fall, Spring, Summer. 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 3210, NURS 3630. Extra fee.


NURS 4030 Adult Health Nursing II (7). 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...
Practice and supervision are required. Speciality laboratory specific comprehensive and assessment. Specialty laboratory

NURS 4050 Oncology Nursing (3). 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. Extra fee.

NURS 4080 Perioperative Nursing Care (4). Spring. Clinical elective with focus on the practice of perioperative nursing. Prerequisites: NURS 3120, NURS 3170, NURS 3180, NURS 3210. Extra fee.

NURS 4120 Nursing Leadership and Management (5). 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 Research Inquiry I and II (4). Spring, Summer. Students will critically evaluate published research for clinical relevance, identify a research problem, select a conceptual framework, reviewed selected literature, and prepare a quantitative or qualitative research proposal. Prerequisites: admission to the RN/MSN program and permission of Undergraduate Associate Dean. Extra fee.

NURS 4150 Advanced Pathophysiology (3). 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. Extra fee.

NURS 4160 Advanced Health Assessment (3). 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 Health Care Aspects of Human Sexuality (3). 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. Extra fee.

NURS 4180 Theoretical and Professional Foundations in Nursing (4). Fall, Spring. Focus on RN student's transition to professional higher education and theory based on practice. Current professional issues are explored. Political, socioeconomic, ethical and legal issues are critically examined and discussed. Prerequisite: admission to RN/BSN program. Extra fee.

NURS 4190 Interpersonal Strategies in Nursing of Older Adults (6). 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 Population Focused Care (5). Fall, Spring. 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 Applied Nursing Research (3). 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. Extra fee.


NURS 4230 Applied Health Assessment (3). 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 Professional Nursing Competency (2). 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. Extra fee.

NURS 4280 Theories of Addictive Behaviors (3). 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. Extra fee.

NURS 4600 Critical Care Nursing (4). 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 Independent Study in Nursing (1-3). 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. Extra fee.

NURS 4720 Perinatal Nursing (4). 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 Nursing Research (3). 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. Extra fee.

OR - Operations Research

OR 3800  Introduction to Management Science (3). 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  Computer Simulation of Management Systems (3).
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.

PACS – Peace & Conflict Studies

PACS 2000  Introduction to Peace and Conflict Studies (3). Fall, Summer. 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  Peace and Cultural Legacies in the Nuclear Age (3).
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  Topics in Peace and Conflict (3). Study of selected topics or subject areas. Course may be repeated for credit up to 6 hours if topics clearly differ.

PACS 4100  Peace and Conflict Studies Abroad (3). 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  Individual Readings in Peace and Conflict (1-3). 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  Field Study in Peace and Conflict (1-3). 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.

PEG – Physical Education, General

PEG 1000  Physical Education General (1). 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  Physical Education General (1). Fall, Spring, Summer.
Develops knowledge, understanding and skills pertinent to the activity. Most activities are coeducational. Offerings vary each term. Courses may be taken for grade or S/U. Approved for distance education.

PEG 2040  Aerobic Dance (1).
Activity course.

PEG 2070  Badminton (1). Fall, Spring. Instruction and training in the principles, knowledge, and skills pertinent to beginning badminton.

PEG 2080  Basketball (1). Fall, Spring. Development of skills, knowledge, and strategies of basketball.

PEG 2110  Bowling (1). Fall, Spring. Instruction and training in the principles, knowledge, and skills pertinent to beginning bowling. Extra fee.

PEG 2170  Cycling (1). Fall, Spring. Instruction and training in the principles, knowledge, and skills of cycling.

PEG 2180  Curling (1). Activity course. Extra fee.

PEG 2220  Classical Ballet I (1).
Activity course.

PEG 2230  Classical Ballet II (1).
Activity course.

PEG 2240  Classical Ballet III (1).
Activity course.

PEG 2300  Modern Dance I (1).
Activity course.

PEG 2310  Modern Dance II (1).
Activity course.

PEG 2320  Modern Dance III (1).
Activity course.

PEG 2340  Tap Dance II (1). Activity course.

PEG 2400  Exercise and Conditioning (1). 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  Fencing (1). Activity course. Extra fee.

PEG 2420  Intermediate Fencing (1). Activity course.
PEG 2430  Fitness Walking (1). 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  Coed Flag Football (1). Activity course.

PEG 2460  Golf (1). Activity course. Extra fee.

PEG 2470  Intermediate Golf (1). Fall, Spring. Instruction and training in the principles, knowledge, and skills pertinent to intermediate golf. Extra fee.

PEG 2480  Advanced Golf (1). Activity course. Extra fee.

PEG 2510  Handball (1). Activity course.

PEG 2530  Basic Hockey (1). Activity course. Extra fee.

PEG 2580  Water Aerobics (1). Activity course.

PEG 2600  Beginning Ice Skating (1). Activity course. Extra fee.

PEG 2610  Figure Skating (1). Activity course. Extra fee.

PEG 2630  Jogging (1). Fall, Spring. Instruction and training in the principles, knowledge, and skills pertinent to jogging. Develop an understanding of jogging for personal health and as a lifetime activity.

PEG 2640  Karate (1). Activity course.

PEG 2650  Racquetball (1). Fall, Spring. Instruction and training in the principles, knowledge, and skills pertinent to beginning racquetball.

PEG 2660  Intermediate Racquetball (1). Activity course.

PEG 2680  Self Defense (1). Activity course.

PEG 2710  Soccer (1). Activity course.

PEG 2720  Intermediate Soccer (1). Activity course.

PEG 2750  Softball - Coed (1). Activity course.

PEG 2760  Squash (1). Activity course.

PEG 2780  Life Guard Training (1). Activity course. Extra fee.

PEG 2800  Beginning Swimming (1). Activity course. Extra fee.


PEG 2820  Advanced Swimming (1). Activity course. Extra fee.

PEG 2830  Tennis (1). Activity course.

PEG 2860  Volleyball (1). Activity course.

PEG 2870  Weight Training (1). Activity course.

PEG 2910  Tension Management (1). Activity course.

PEG 2920  Pilates (1). Fall, Spring. Instruction and training in the principles, knowledge, and skills pertinent to Pilates.

PEG 2930  Tai Chi (1). Fall, Spring. Tai Chi is an ancient Chinese movement form that is both an exercise for health and martial art. Course covers slow consistent and smooth movements focusing on strength, balance, and flexibility.

PEG 2940  Yoga (1). Fall, Spring. Course focuses on Yoga postures and self-reflection on the mind-body connection: to improve physical health, increase flexibility, strength, and mental health.

PEG 2950  Zumba (1). Fall, Spring. Non-competitive Latin influenced aerobic dance; individualized workouts. Emphasis is on Zumba dance techniques, and the benefits of aerobic dance to improve fitness and overall health.

PEG 2960  Rock Climbing (1). Fall, Spring. The course covers all the basic elements associated with the sport of rock climbing. This includes belaying, hold indentification, climbing technique, balance and fluid movement. Additional skills include: lead climbing and bouldering as well as route setting.

PEG 2970  White Water Rafting (1). Fall. The course covers all the basic elements associated with the sport of white water rafting: risk management, water movement, currents, eddies, paddling strokes, raft construction, hazard determination, safety codes, equipment, river reading and hazard recognition. Mandatory weekend trip.

PHIL - Philosophy

PHIL 1010  Introduction to Philosophy (3). Fall, Spring. Systematic study of enduring human concerns about God, morality, society, the self and knowledge. Applicable to the BG Perspective (general education) humanities and arts requirement.

PHIL 1020  Introduction to Ethics (3). 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  Introduction to Logic (3). 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 Contemporary Moral Issues (3). 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 1920Q Inquiry in Humanities and Creative Arts (3). Fall, Spring. Philosophical methods of inquiry will be studied and used to explore fundamental issues of human existence that have occupied and puzzled people since the origin of human thought down to the present time. Students will employ philosophical reasoning to understand and critique the ideas and reasoning of others, and to develop and defend their own thinking. The focus will be on issues related to a specific theme, and the investigation will involve a range of both in-class and out-of-class activities. Credit not allowed for PHIL 1920Q and PHIL 1020 or PHIL 1250.

PHIL 2020 History of Ethics (3). 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 Aesthetics (3). 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 History of Ancient Philosophy (3). 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 History of Modern Philosophy (3). 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 World Religions (3). 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 Philosophy of Law (3). 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. Approved for distance education.

PHIL 2190 Philosophy of Death and Dying (3). 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 Business Ethics (3). 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 Socialism, Capitalism and Democracy (3). 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 Philosophy of Punishment (3). 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 Education.

PHIL 2300 Scientific Reasoning (3). 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 2320 Environmental Ethics (3). Fall, Spring. Critical evaluation of the ethical issues concerning the relationship between human beings and the environment. Such issues as the value of wilderness, responsibilities to future generations, sustainability, and differing cultural attitudes toward the environment will be examined. Applicable to the BG Perspective (general education) humanities and arts requirement.

PHIL 2360 Philosophy of Film (3). 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 Topics in Philosophy (3). Fall, Spring. Subject matter designated in class schedule. Primarily for students with little or no background in philosophy. May be repeated.

PHIL 2420 Medical Ethics (3). 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 Philosophy of Feminism (3). 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 Life, Death, Law and Morality (3). 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 Ethical Theory (3). 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 Symbolic Logic (3). 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 Philosophy of Mind (3). Fall or Spring. Topics covered will include some of the following: 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. Prerequisites: 3 hours in Philosophy.

PHIL 3110 History of Medieval Philosophy (3). On demand. Major philosophical positions of Middle Ages; St. Augustine through Renaissance philosophers. Prerequisite: three hours in PHIL or consent of instructor.

PHIL 3120 Social and Political Philosophy (3). 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 Philosophy of Psychology (3). 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 Philosophy of Religion (3). 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. Approved for distance education. Prerequisite: three hours in PHIL or consent of instructor.

PHIL 3210 Indian and Chinese Philosophy (3). 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 Theory of Knowledge (3). Alternate years. Theories of knowledge, truth, belief and evidence. Prerequisite: three hours in PHIL or consent of instructor.

PHIL 3310 Existentialism (3). 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 3400 Problems in Philosophy (3). On demand. Subject matter designated in class schedule. May be repeated. Prerequisite: three hours in PHIL or consent of instructor.

PHIL 3440 Computers and Philosophy (3). 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 Workshop on Current Topics (1-4). 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 Philosophy of Language (3). 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 History of Contemporary Anglo-American Philosophy (3). 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 Contemporary Continental Philosophy (3). 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 Metaphysics (3). 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 Topics in the Philosophy of Law (3). 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 4240 Topics in Social and Political Philosophy (3). 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 Topics in Moral Philosophy (3). 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: six hours in PHIL or consent of instructor.

PHIL 4310 Topics in Philosophy of Science (3). 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 Philosophy of Social Science (3). 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, PSYC, SOC or HIST or consent of instructor.

PHIL 4330 Philosophy and Physics of Space and Time (3). 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 Senior Seminar (3). Fall. 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 Philosophy of Medicine (3). 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 Topics in Business Ethics (3). 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 Readings and Research (1-3). 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 Seminar in Philosophy (3). On demand. In-depth examination of one specific philosopher, philosophical movement or problem. Determined by need and interest of student. Prerequisite: six hours in PHIL or consent of instructor. May be repeated.

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PHYS - Physics

PHYS 1000 Physics of Natural World (3). 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. Approved for Distance Education.

PHYS 1010 Basic Physics (3). 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 Selected Topics in Physics (1-3). 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 1940Q Inquiry in Physics (3).** Fall, Spring. Scientific inquiry into physical reality as portrayed in fiction and film throughout the years. Students will critically assess the physical features of literacy and cinematic work, such as motion, energy, or measurement, and develop relationships between quantities that lead to physical laws. Credit not allowed for both PHYS 1940Q and PHYS 1000. Prerequisite: Open only to Freshman and Sophomore students.

**PHYS 2010 College Physics I (5).** 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 College Physics II (5).** 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 University Physics I (5).** 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 University Physics II (5).** Spring. PHYS 2110 continued. Wave motion, sound, optics, electricity and magnetism. Four lecture-recitations and one two-hour laboratory. Prerequisite: PHYS 2110. Corequisite: MATH 2320. Applicable to the BG Perspective (general education) natural sciences requirement. Extra fee.

**PHYS 2700 Independent Study (1-3).** 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 2800 Scientific Inquiry Into Physics (3) (PHYS General Education).** Fall, Spring, Summer. PHYS 2010 and 2020. 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 3010 Modern Physics (3).** 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 Thermal Physics and Optics (3).** 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 3090 Atomic and Nuclear Physics (3).** 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 Modern Physics Laboratory (1).** 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 Thermal Physics and Optics Laboratory (1).** Spring. Laboratory work designed to accompany material presented in PHYS 3020. One three-hour laboratory. Corequisite: PHYS 3020. Extra fee.

**PHYS 3210 Recent Progress in Astronomy (2).** 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 2030 or PHYS 2120; ASTR 1010. Not open to students majoring in physical sciences.

**PHYS 3500 Musical Acoustics (3).** Spring alternate years. Nature of vibration; sound waves, sources of musical sounds—strings, air columns, percussion, voice and noise; acoustics of rooms; recording, reproduction and synthesis of sound. Not open to students majoring in physical sciences.

**PHYS 3600 Environmental Physics (3).** 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 Workshop on Current Topics (1-3).** 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 Selected Topics in Physics (1-3).** 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 Methods of Mathematical and Computational Physics I (3).** 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 Methods of Mathematical and Computational Physics II (3).** 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 4010 or permission of instructor.

**PHYS 4030 Stellar Structure and Evolution (3).** 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 Solid State Physics (3).** Spring alternate years. Continuum and atomic theories of solids, lattice vibrations, specific heat of solids, electron theory of metals and semiconductors. Superconductivity. Three lecture-recitations. Prerequisites: PHYS 3020.


**PHYS 4170 Quantum Mechanics (3).** 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 Schrödinger’s equation, operator methods and approximation techniques. Prerequisites: PHYS 3010, PHYS 4010.

**PHYS 4180 Electricity and Magnetism (3).** Fall alternate years. Electric and magnetic fields; Maxwell’s theory of electromagnetic field with applications in propagation, absorption, reflection, transmission of radiation. Prerequisite: PHYS 4010. Corequisite: MATH 2330.

**PHYS 4330 Philosophy and Physics of Space and Time (3).** 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 PHYS 4330. Prerequisite: three hours in PHIL; three hours in either PHIL, MATH, or PHYS; or consent of instructor.

**PHYS 4700 Independent Study (1-3).** 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 Special Problems in Physics (1-3).** On demand. Readings and research on recently developing topics chosen to fit needs of students. May be repeated.

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**POLS – Political Science**

**POLS 1100 American Government: Processes and Structure (3).** 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. Approved for distance education.

**POLS 1710 Introduction to Comparative Government (3).** Fall, Spring. Basic concepts, approaches to and comparisons of different political systems, including political cultures, participation, interest groups, institutions and processes; essential tools and methods for the study of political systems in the world. Applicable to the BG Perspective (general education) social sciences and international perspective requirements. Approved for distance education.

**POLS 1720 Introduction to International Relations (3).** 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. Approved for distance education.

**POLS 1930Q Inquiry in Individuals and Society (3).** Political theory and the analysis of politics and government. Introduces major theoretical concepts in political science and how they are used to analyze and explain politics. Students examine the historical development of each concept in classical and modern political theory. Concepts are applied to case studies of political events and controversies. Examples of concepts may include, but are not limited to: power, security, human rights, democracy, representation, identity, class, peace, terrorism, justice, transparency, the state, development,
and environmentalism. Prerequisite: Open only to Freshman students.

**POLS 2900 Introduction to Political Inquiry (3).** 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 Modern Political Ideologies (3).** 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 American Domestic Public Policy (3).** Description and analysis of environment, education, defense, civil rights, criminal justice, health, welfare and other selected contemporary policy areas and issues.

**POLS 3030 Introduction to Public Administration (3).** 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. Approved for distance education.

**POLS 3040 American Political Thought (3).** As reflected in colonial, Federalist, Civil War and late 19th century political thought.

**POLS 3310 State and Local Government (3).** 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. Approved for distance education.

**POLS 3350 Global Resource Politics (3).** 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 Environmental Politics and Policies (3).** 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 Public Opinion (3).** 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 Legislative Process (3).** Spring. Legislative behavior and decision making; legislatures as institutions; forces involved in the formation of public policy; legislative elections; executive- legislative relations; analysis of the lawmaking process.

**POLS 3460 The Presidency (3).** Fall. Constitutional origins of the presidency; presidential elections; presidential leadership and relationships with the public, media, Congress, the bureaucracy, and judiciary; policymaking within the White House.

**POLS 3470 Introduction to Law and Judicial Process (3).** American judiciary, particularly Supreme Court, as political institution; decision-making process and interaction of courts with rest of political system. Approved for Distance Education.

**POLS 3510 Western European Politics (3).** 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. Approved for Distance Education.

**POLS 3520 British Politics (3).** Spring. Analysis of institutions, parties, and policies of the United Kingdom. Emphasis on post-World War II economic and political development, current public and foreign policies, and ethnic tension in Northern Ireland. Prior completion of POLS 1710 and/or POLS 3510 recommended.

**POLS 3530 Canadian Government and Politics (3).** 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 Governments and Politics of Latin America (3).** Fall. Influence of cultural and socioeconomic 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 Governments and Politics of Middle East (3).** Governmental and political processes of Turkey, Iran, Iraq, Israel, Egypt, other selected Middle Eastern and North African political systems; major developmental problems of the area.

**POLS 3660 Governments and Politics of Asia (3).** 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 3700  Model United Nations (3). Spring. Role-playing simulation of the United Nations. Students attend a National Model UN conference and represent an assigned country’s policy positions, seeking to pass resolutions on international issues in various UN committees. Conference agenda topics may include international security, development, trade, human rights, international organizations, law, and environment. Course topics include history and foreign policies of assigned country; UN structure, functions, and rules of debate; negotiation and diplomacy. May be repeated. Extra Fee.

POLS 3720  Contemporary World Politics (3). 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. Approved for Distance Education.

POLS 3740  American Foreign Policy Process (3). 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. Approved for distance education.

POLS 4000  Topics in Political Science (1-3). 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  Western Political Thought I (3). 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  Western Political Thought II (3). 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  20th Century Political Thought (3). 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  Constitutional Law: Powers and Relationships (3). Fall. Supreme Court cases relating to U.S. governmental structure, powers and relationships.

POLS 4170  Constitution Law: Procedural Rights (3). Due process, right to counsel, search and seizure, electronic surveillance and jury trial.


POLS 4200  Administrative Law (3). 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. Approved for distance education.

POLS 4210  Bureaucratic Politics (3). 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 4230  Comparative Public Administration (3). 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  Supreme Court and Contemporary Issues (3). 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.

POLS 4250  Constitutional Law Advocacy (3). 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 4260  Law and Society (3). Relationship between legal change and social change. Influence of power on legal processes. Conditions under which legal techniques are effective in addressing social inequality.

POLS 4300  Local Government Management and Politics (3). 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  Political Parties and Voter Behavior (3). 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 4420 Women in American Politics (3). Spring, Alternate years. Seminar on women's participation in American politics. Trends in women's political participation, political interest, political knowledge, and political attitudes are examined, including regional and cultural variations. Explanations for women's under-representation in elective office are explored, including differences in childhood socialization, education, workforce participation, political engagement, treatment by the media, and recruitment by political elites. Credit allowed for only one of POLS 4420/WS 4420.

POLS 4430 Politics and the Mass Media (3). Political analysis of relationships between the media and the government and the effects on public policy issues and electoral campaigns.

POLS 4510 Human Rights (3). Spring, fall. This course provides an introduction to the theory and practice of human rights in international politics. The first half of the course will discuss the origins of the idea of human rights, the current system of international human rights treaties, and the role of international institutions and NGOs as enforcers. The second half of the course will examine a number of case studies based on classic problems in the theory of human rights as well as current issues and dilemmas in the field. Prerequisite: POLS 1710 or 1720.

POLS 4540 Politics of Post-Communist States (3). 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 Intergovernmental Relations (3). 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 Politics and Issues of World Development (3). Spring, alternate years. Political and economic modernization problems; equity versus development; hunger and population; foreign aid, technology transfer and other selected topics.

POLS 4700 Individual Readings (1-3). 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 International Law (3). Alternate Spring. History, nature, sources and applications; relationship between law and society at international level.

POLS 4750 International Organization (3). 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 International Political Economy (3). 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. Approved for Distance Education.

POLS 4780 International Conflict (3). 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 Conflict Resolution (3). 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 4900 Capstone Seminar in Political Science (3). Spring, Fall. The capstone seminar integrates the subfields of political science. The course explores broad concepts that cross subfields and applies multiple approaches to studying these concepts. The seminar integrates and deepens the knowledge students have acquired from previous coursework in political science. Students are required to complete a major research paper related to the central course themes. Prerequisites include POLS major and junior/senior status.

POLS 4910 Seminar for Intern (3). Suggested for students planning internships. Survey and analysis of literature dealing with practice political experiences. Use of biographical material as sources.

POLS 4920 Field Study (1-3). Fall, Spring, Summer. For students working on political internship programs and political campaigns. May be repeated to six hours.

POLS 4950 Honors Seminar in Contemporary Political Science (1-8). 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 Workshop on Current Topics (1-4). On demand. Intensive educational experience on selected topics in political science. May be repeated if topics differ, on approval of advisor. No more than nine hours of POLS 4960 (formerly POLS 395) will count toward a major or minor in political science.
POPC – Popular Culture

POPC 1600 Introduction to Popular Culture (3). 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 Popular Culture and Media (3). 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 Black Popular Culture (3). 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 1920Q Inquiry in Humanities and Creative Arts (3). Fall, Spring, Summer. Inquiry into whether popular culture is the new humanities of the 21st century. This course will explore whether and to what extent popular culture in the contemporary media environment provides resources for artistic expression, formation of individual and group identity, discussion of ideas, and imagining of creative solutions to problems. Students will learn methods of textual analysis and concepts of cultural theory and will use them to interpret the meanings of specific examples of contemporary popular culture and assess their impact on society. Prerequisite: Open only to Freshman Students

POPC 2200 Introduction to Folklore and Folklife (3). 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 Studies in Popular Culture (1-3). Study of theme, era or issue in popular culture. Subject matter designated in class schedule. May be repeated once if topics differ. Approved for distance education.

POPC 2500 Introduction to Popular Film (3). 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 Popular Culture Research (3). Fall or Spring. Examines different methods of popular culture research and theories on which they are based. Application of course concepts to contemporary issues in popular culture. Prerequisites: major or minor in POPC and POPC 1600 or POPC 1650. Required for majors.

POPC 2700 Introduction to Contemporary Popular Literature (3). Alternate years. Popular literary formulae, publishing industry, relationship between popular literature and reading public, functions of popular literature in society.

POPC 2800 Introduction to Popular Music (3). 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. Approved for Distance Education.

POPC 2900 Television as Popular Culture (3). Fall or Spring. Relationship between popular television programming and American society; viewing of appropriate television.

POPC 3000 Topics in International/Global Popular Culture (3). 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 3100 Global Popular Culture (3). Fall or Spring. Examination of the movement of popular culture around the world and the balance of global and local influences on cultural products and practices, the effects of the movement of people around the globe through travel and migration, and the ways that individuals and communities negotiate regional specificity and global assimilation. Approved for distance education.

POPC 3200 Folktales and Legend (3). 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, ballads, etc.; analysis of folk mythology.

POPC 3210 Folklife and Material Culture (3). 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 The Folk Group/Folk Region (3). 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 3450 Internet Communities (3). Fall, Spring or Summer; Ethnographic study of online communities bonded by common interests, such as social networking sites, communities of exchange, blogs,
dating sites, fan or interest groups, games and simulations.

**POPC 3500 Advanced Studies in Popular Film (3).** 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 Youth and Popular Culture (3).** 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 History of Popular Literature (3).** Alternate years. Detective, science fiction, western, mystery, best sellers, poetry, magazine fiction. Prerequisite: any 2000-level literature course or permission of instructor.

**POPC 3800 Contexts of Popular Music (3).** 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. Approved for distance education.

**POPC 3900 Topics in Television Studies (3).** Fall, Spring or Summer; Critical analysis of television shows in cultural context, focusing on a specific genre, issue, theory, etc. (such as Situation Comedy, The Female Detective, or Feminist Television Criticism). May be repeated to six hours if topics differ. Extra Fee.

**POPC 3950 Workshop on Current Topics (1-3).** 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 Topics In Folklore Genres (3).** 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 Popular Entertainments (3).** 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 Popular Culture Advanced Studies (3).** 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. Approved for distance education.

**POPC 4700 Studies in Popular Literature (3).** 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 Senior Seminar Popular Culture (3).** 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 Fieldwork in Folklore Studies (2).** 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 Problems in Popular Culture (1-3).** 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.

### PSYC - Psychology

**PSYC 1010 General Psychology (4).** 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 General Seminar (1-3).** Fall, Spring. Specific content areas offered depends on demand and interest of staff. May be repeated twice. Prerequisite: consent of instructor.

**PSYC 2700 Quantitative Methods I (4).** Fall, Spring, Summer. Principles of measurement. Quantitative analyses of behavioral measures, including measures of typicality, individual differences, correlational methods and tests of significance. Three lectures hours; two laboratory hours. Prerequisites: PSYC 1010 and MATH 1200 or MATH 1220 (or their equivalents) or consent of instructor.

**PSYC 2900 Introduction to Laboratory Methods in Psychology (4).** 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 Introduction to Cognitive Science: Minds and Brains (3).** 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 Psychology of Child Development (3).** Fall, Spring. Major concepts, theories and principles of child development. Coverage is from conception until adolescence. Prerequisite: PSYC 1010.

**PSYC 3040 Psychology of Adolescent Development (3).** On demand. Major concepts, theories and principles of adolescent development. Prerequisite: PSYC 1010.

**PSYC 3050 Psychology of Personality Adjustment (2).** Problems of personal adjustment. Related problems of theory and measurement of personality. Prerequisite: PSYC 1010.

**PSYC 3060 Psychology of Gender (3).** 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 3060H Psychology of Gender (3).** 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 Human Sexuality (3).** 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 Introduction to Clinical Psychology (3).** Models and roles associated with delivery of mental health services; major conceptions of psychological assessment and treatment. Prerequisite: PSYC 1010.

**PSYC 3090 Psychology of Adult Development and Aging (3).** 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 Lifespan Developmental Psychology (3).** 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. Approved for Distance Education.

**PSYC 3110 Social Psychology (3).** 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 Research in Social Psychology (4).** 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 Conditioning (4).** 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 Cognitive Psychology I: Learning and Memory (4).** 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.

**PSYC 3220 Cognitive Psychology II: Thinking and Problem Solving (4).** 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 Psychophysiology (4).** 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 1040 or BIOL 2050 is strongly recommended. Extra fee.

**PSYC 3290 Laboratory in Developmental Psychology (4).** Principal 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 Introduction to Neuroscience (3).** 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 important role in understanding psychology. No prerequisite. Credit not allowed for both PSYC 3300 and BIOL 3300.

**PSYC 3310 Psychopharmacology and Clinical Neuroscience (3).** 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 Neuroscience of Emotions and Motivations (4). 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 Cognitive Neuroscience (4). 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 Behavioral and Neural Genetics (3). 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 Psychoneuroendocrinology (3). 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 Survey of Industrial and Organizational Psychology (3). 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 Quality of Work Life (3). 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 Psychology of the Workplace (4). 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 Psychology of Language (3). 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 Quantitative Methods II (4). 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 Sensation and Perception (4). 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 Supervised Research in Psychology (1-3). 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 Workshop on Current Topics (1-5). 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 Personality Theory (3). Scientific constructs in personality theory; contemporary theories with historical antecedents; assessment of relationship to general psychology. Prerequisite: PSYC 1010.

PSYC 4050 Psychology of Abnormal Behavior (3). Fall, Spring, Summer. Data and concepts used in understanding, labeling and modifying deviant behavior. Prerequisite: PSYC 1010. Approved for Distance Education.

PSYC 4060 Developmental Psychopathology (3). 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 Psychology of Religion and Spirituality (3). Religion and
spirituality from a psychological perspective. Religion and motivation, development, conversion, altruism, coping, mental health, psychotherapy. Prerequisite: PSYC 1010.

**PSYC 4400 General Seminar (1-4).** Specific content areas offered depends on demand and interest of staff. May be repeated three times. Prerequisite: consent of instructor.

**PSYC 4520 Personnel Selection (3).** 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 Interviewing (3).** 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 Stress Factors of Work (3).** 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 Introduction to Psychological Testing (3).** 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 Internship (1-3).** 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 Independent Research in Psychology (1-3).** 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 Senior Honors Seminar (3).** 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 Senior Honors Seminar (3).** 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.

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**PUBH – Public Health**

**PUBH 1930Q Evidenced Based Inquiry in Public Health (3).** Students use inductive and deductive reasoning to analyze observations about human health behaviors. Students learn to formulate hypotheses that explain behaviors, attitudes, and beliefs that affect their health, wellness, and society. Prerequisite: Open only to Freshman and Sophomore students.

**PUBH 2050 Acquired Immunodeficiency Syndrome (1).** 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.

**PUBH 2100 Introduction to Community Health (3).** 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 International Health (3).** 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 BG Perspective (general education) social sciences and international perspective requirements. Approved for Distance Education.

**PUBH 3011 Public Health and Sanitation (3).** 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.

**PUBH 3020 Applied International Health (3).** 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 Community Health Planning and Evaluation (3).** 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 Introduction to Public Health (3).** 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 BG Perspective (general education) social sciences requirement.

PUBH 3300 Research Methods in Public and Allied Health (3). 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 and MATH 1150 or MATH 2470 or STAT 2000 or STAT 2110 or SOC 3690 or PSYC 2700.

PUBH 3400 Introduction to Human Diseases (3). 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 or permission. Approved for Distance Education.

PUBH 3700 Sexually Transmitted Diseases (3). 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 3800 AIDS Education in the Schools (2). 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.

PUBH 4030 Issues in Global Health (3). 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 4490 Epidemiology (3). 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: PUBH 4490 and BIOL 4490.

PUBH 4500 Emerging Infectious Diseases (3). 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.

PUBH 4800 Seminar in Public Health (1-4). On demand. Systematic study of selected topics in public health. May be repeated if topics differ. Prerequisite: consent of instructor.

PUBH 4810 Independent Study in Public Health (1-4). 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 Directed Research in Public Health (3). 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 Internship in Public Health (3). On demand. Supervised internship experience in public health. May be repeated if topics differ. Prerequisite: consent of instructor.

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QS – Quality Systems

QS 1940Q Inquiry in Science and Technology (3). Observation and analysis are fundamental to improving efficiency and effectiveness of technological systems that include: manufacturing, construction, medicine, agriculture, information and service industries. In this learner centered course, students learn the basic principles of quality assurance and quality thinking through project based learning. Prerequisite: Open only to Freshman students.

QS 2650 Introduction to Lean Processes/Systems (3). 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 3610 Auditing Change Services (3). Summer. Auditing 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. Audits may include change relationships to energy and sustainability, safety and other areas related to quality. Team-based project configuring e-portfolio in ISO 9000 infrastructure. Prerequisite: none.

QS 3710 Six Sigma Systems (3). 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: none.

**QS 3800  Lean Six Sigma (3).** Summer. 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 3550 and QS 3710.

**QS 4600  Synchronous Quality Planning (3).** 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 3550, QS 3610, and QS 3710.

**QS 4650  Leadership for Lean Six Sigma (3).** 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 3550, QS 3610, and QS 3710.

**QS 4700  Kaizen Project (3).** Fall. Lean sigma experience for Kaizen 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 change of movement or motion in work and reduced variation based on data collected. Capstone project configuring e-portfolio in ISO 9000 infrastructure. Prerequisites: All QS 3000 courses.

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**RADT – Radiologic Technology**

**RADT 1000  Fundamentals of Radiography (2).** 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.

**RADT 1110  Radiographic Procedures 1 (2).** 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.

**RADT 1120  Radiographic Procedures Lab 1 (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.

**RADT 1210  Radiographic Procedures 2 (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.

**RADT 1220  Radiographic Procedures Lab 2 (1).** 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.

**RADT 1230  Imaging and Exposure (1).** 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.

**RADT 1410  Radiation Physics I (3).** 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.

**RADT 1810  Directed Practice (3).**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.

**RADT 1820  Directed Practice (3).** 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 the instructor. Grade S/U. Extra fee.

**RADT 1830 Directed Practice (3).** 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 Computers in Radiologic Sciences (1).** 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. Approved for Distance Education.

**RADT 2420 Radiation Biology (2).** 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 Image Analysis (2).** 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 Radiographic Pathology (2).** Spring. Introduces theories of disease causation and the pathophysiologic disorders that compromise health systems. Etiology, pathophysiological 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 Quality Assurance (2).** 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 2530 CT Basics (2).** Introduces concepts and application of Computed Axial Tomography. The history of CT, technical factors, scanning, anatomy and pathology are presented. Offered at Firelands only.

**RADT 2810 Directed Practice (4).** 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 Directed Practice (4).** 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 Directed Practice (4).** 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 Special Topics in Radiologic Science (1-3).** 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. Offered at Firelands only. Approved for Distance Education.

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**REHB – Rehabilitation Counseling**

**REHB 4010 Introduction to Rehabilitation Counseling (3).** Characteristics and principles of the rehabilitation process; disabilities and agencies serving the disabled.

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**RESC – Residential Center**

**RESC 2000 Field Experiences (1).** 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 sophomores). Includes films, exhibits, concerts, debates, panel discussions, art events, speakers, field trips, and community service learning. May be repeated.

**RESC 4700 Independent Study (1-3).** 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
RESP – Respiratory Care

RESP 1050 Introduction to Respiratory Care (2). 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.

RESP 1200 Principles of Respiratory Care I (3). Basic scientific principles related to respiratory care (gases, fluid flow, other). Principles, procedures, and equipment of medical gas therapy, humidity and medical aerosols, lung inflation therapy, airway clearance and bronchial hygiene therapy. Isolation procedures and sterilization and processing of respiratory equipment. Basic patient care and assessment. Two hours of lecture and three hours lab. Prerequisite: Admission into program. Extra Fee.

RESP 1210 Principles of Respiratory Care II (3). Principles and concepts of advanced airway management techniques, emergency life support, acid-base balance, arterial blood gas sampling and analysis, pulmonary function testing, thoracic imaging, bedside monitoring, non-invasive ventilation, and quality control. Laboratory activities focus on preclinical skill development and decision making. Two hours of lecture and three hours of lab. Prerequisite: Admission into the program.


RESP 2030 Pulmonary Pathophysiology (3). 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 Respiratory Critical Care Procedures (4). Manual resuscitators, airway management, arterial sampling and analysis, quality control procedures, non-invasive gas monitoring. Mechanical ventilation. Prerequisite: RESP matriculation requirements. Three hours lecture, three hours lab. Extra fee.

RESP 2220 Principles of Respiratory Care III (3). 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 Neonatal and Pediatric Respiratory Care (3). 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, extra corporeal membrane oxygenation, pulmonary and cardiac disorders, parent education and home care are included. Prerequisites: Program matriculation or permission of instructor.

RESP 2510 Respiratory Care Directed Practice (3). Includes basic respiratory skills, infection control, isolation, equipment processing, patient assessment, charting, oxygen therapy, aerosol administration, bronchopulmonary hygiene, hyperinflation modalities, artificial airway management, suctioning techniques, noninvasive monitoring, PF/TP, ABG’s, 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 Cases and Reviews in Respiratory Care (2). 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 up to six hours. Prerequisite: must meet program matriculation standards or permission of instructor.

RESP 2610 Respiratory Care Directed Practice (2). 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 Respiratory Care Directed Practice (3). 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 Respiratory Care Directed Practice (3). Continuation of procedures with the addition of neonatal and pediatric respiratory care. Minimum of 225 hours contact
RESP 2900  Special Topics in Respiratory Care (1-3). 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  Pharmacology for Respiratory Care (2). 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 AHTH 1310, or BIOL 3310 and BIOL 3320, or permission of instructor. (Web-based.)

RESP 3400  Advanced Respiratory Care Practitioner Review (2). Comprehensive content review based on current National Board for Respiratory Care (NBRC) Content Matrices. This course will include recommendations and strategies essential 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  Advanced Cardiac Life Support (ACLS) (3). Advanced patient assessment and management techniques using current national guidelines and recommendations. Includes development of 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  Cases and Reviews in Respiratory Care (3). Fall or Spring. Critical thinking, patient/environmental assessment skills, and evidence-based clinical practice guidelines 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  Capstone Experience and Seminar I (3). Supervised field experience in an approved subspecialty 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  Capstone Experience and Seminar II (3). The second of two capstone courses for the Bachelor of Applied Health Science, Respiratory Care Specialization. Supervised field experience in an approved subspecialty 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.

ROCS 2200  African Literature (3). 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 2950  Field Experience: Spain/France/Italy (1-3). Fall, Spring, Summer. This field experience course will assist students in reflecting on their study abroad experience while improving their speaking and writing skills and intercultural knowledge by creating a portfolio that highlights the student's interests and progress during the time spent abroad. May be repeated up to six hours.

ROCS 4700  Readings in Romance Languages and Literature (1-3). 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.

RUSN - Russian

RUSN 1010  Elementary Language and Culture I (4). 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  Elementary Language and Culture II (4). RUSN 1010 continued. Increased use of authentic reading materials both in print and on the web. Completion of elementary grammar study. Prerequisite: RUSN 1010, one year of high school Russian, or by placement. Applicable to the BG Perspective (general education) humanities and arts and international perspective requirements. Approved for distance education.

ROCS 2000  European and Latin American Cinema (3). 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.
RUSN 1170 Conversation and Pronunciation I (1). Oral practice for beginning students. Concurrent enrollment in RUSN 10 10 or RUSN 1020 recommended. May be repeated to three hours.

RUSN 1180 Conversation and Pronunciation II (1). Oral practice for intermediate students. Concurrent enrollment in RUSN 20 10 or RUSN 2020 recommended. May be repeated to three hours.

RUSN 2000 Study Abroad I (2-6). Intermediate in-country Russian language training. Prerequisite: RUSN 1020 or equivalent. May be repeated up to 12 hours.

RUSN 2010 Intermediate Russian I (4). 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 Intermediate Russian II (4). 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 Russian Culture (3). 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. Approved for Distance Education.

RUSN 2160 Post-Communist Russia (3). 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 Study Abroad II (2-6). Advanced in-country Russian language training. Prerequisite: RUSN 2020 or equivalent. May be repeated up to 12 hours.

RUSN 3120 Introduction to Russian Literature (3). 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 Contemporary Eastern European Societies and Cultures (3). 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 English.

RUSN 3170 Composition and Conversation I (3). Fall. Mastery of conversation and writing for personal and professional needs. Corresponding aspects of contemporary culture. Advanced grammar review. Prerequisite: RUSN 2020 or by placement.

RUSN 3180 Composition and Conversation II (3). Spring. RUSN 3170 continued. Prerequisite: RUSN 3170.

RUSN 3200 Readings in Russian Culture (2). 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 Workshop in Translation (2). 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 Russian Poetry (3). 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 Russian Novel (3). 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 Russian Drama (3). 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 Russian Film (3). 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 Advanced Composition and Conversation (3). 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 Journalistic Russian (2). Advanced skills for reading the media in Russian. Prerequisite: RUSN 2020 or consent of instructor.
RUSN 4800 Selected Topics (1-3). Topic chosen to meet curriculum needs and student requests. May be repeated to six hours. Approved for Distance Education

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

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SEES - Earth, Environment & Society

SEES 3000 Geospatial Science (3). 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. Approved for distance education.

SEES 4100 Geographic Information Systems (3). Fall and Spring. Collection, manipulation, integration and automated display of spatial data from social and natural sciences. Two hours lecture, two hours of lab. Prerequisites: SEES 3000 or consent of the instructor.

SEES 4500 Remote Sensing (3). Spring. 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. Two one-hour lectures and a two-hour lab.

SEES 4700 Directed Readings (1-3). On demand. Supervised independent readings in an area of Geology, Geography, and/or Environmental Studies. May be repeated. Prerequisite: consent of instructor. Graded A/F.

SEES 4800 Seminar in Earth, Environment & Society (1-3). Fall, Spring. Systematic study of selected topics that bridge the disciplines of geology, geography, and environmental studies. May be repeated.

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SM – Sport Management

SM 2010 Introduction to Sport Management (3). Basic concepts of sport management; career preparation; professional opportunities. Prerequisite: Declared sport management major.

SM 2140 Introduction to Research in HMLS (3). 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 1150 or higher.

SM 2210 History and Philosophy of Sport (3). Major historical and philosophical developments in sport.

SM 3010 Sport and Event Management (3). Processes for managing sport and event enterprises. Roles and skills used by sport and event managers. Prerequisite: 2.50 cumulative GPA, C or better in SM 2010 or KNS 2270.

SM 3050 Sport and Event Promotion (3). 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: 2.50 cumulative GPA, C or better in MKT 3000 and C or better in either SM 2010 or KNS 2270.

SM 3650 Foundations of Sport Psychology (3). 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: 2.50 cumulative GPA, PSYC 1010.

SM 3660 Psychological Aspects of Exercise and Fitness (3). Psychological considerations of exercise and fitness, psychological techniques to enhance adherence to fitness/rehabilitation programs and to enhance coping with exercise related injury. Prerequisite: 2.50 cumulative GPA, PSYC 1010.

SM 3870 Practicum in Sport Management (1-5). Under supervision of sport management division of School of HMSLS, credit hours approved separately by program area. Prerequisites: 2.50 cumulative GPA, completion of at least 45 hours at time of application, minimum grade of C in SM 2010, 2140, 3010, formal application process required (deadlines: Aug 15 for fall; Oct 15 for spring; Feb 15 for summer). May be repeated up to 5 hours. Extra fee.

SM 3900 Legal Aspects of Sport and Recreation (3). Negligence liability; control of amateur, professional and school sport; violence/crowd control; product liability; risk management; selected current issues. Prerequisite: 2.50 cumulative GPA, junior standing.

SM 3950 Workshop on Current Topics (1-3). 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. Approved for distance education.

SM 4250 Sport and Gender (3). Cultural, social-psychological and physiological considerations associated with gender and participation in sport and physical activity. Prerequisite: 2.50 cumulative GPA, junior standing.

SM 4500 Managing Revenues and Expenditures in Sport Enterprise (3). 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: 2.50 cumulative GPA, SM 2010, SM 3050.

SM 4700 Independent Study in Sport Management (1-3). 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 4750 Sport and Public Assembly Facilities (3). Designing, planning, managing public and private sport and other public assembly facilities. Prerequisites: 2.50 cumulative GPA, SM 3870 and junior standing.

SM 4870 Practicum in Sport Management (1-5). Under supervision of sport management division of School of HMSLS, credit hours approved separately by program area. Prerequisites: SM 3870, 2.50 cumulative GPA, completion of at least 60 hours at time of application, minimum grade of C in SM 2010, 2140, 3010, formal application process required (deadlines: Aug 15 for fall; Oct 15 for spring; Feb 15 for summer). May be repeated up to 5 hours. Extra fee.

SM 4890 Internship in Sport Management (15). Field experience for sport management majors only. Prerequisites: 2.50 cumulative GPA, completion of at least 75 hours at time of application, minimum grade of B in SM 3870 or 4870, formal application process required (deadlines: Aug 15 for fall; Oct 15 for spring; Feb 15 for summer). Extra fee.

SOC - Sociology

SOC 1010 Principles of Sociology (3). Fall, Spring, Summer. Scientific study of social structure, interaction, and institutions. Topics include gender, race, class, family, culture, and crime. Applicable to the BG Perspective (general education) social sciences requirement.

SOC 1930Q Inquiry in Individuals and Society (3). Fall, Spring. This course introduces students to methods of inquiry in the discipline of sociology. The course emphasizes how individual experiences and life changes are shaped by the social world, including the social groups to which individuals belong, the major institutions of society in which they are embedded, and the particular times and places in which they live. The course also emphasizes the socially constructed nature of social reality as well as critical thinking about issues of diversity and inequality across groups in society. Credit not given for both SOC 1930Q and SOC 1010. Prerequisite: Open only to Freshman students.

SOC 2020 Social Problems (3). Fall, Spring. Application of sociological concepts and theories to understand the social causes of problems such as poverty, war, and global warming, and why some problems seem more important to us than others. Problems are examined sociologically with an eye toward possible solutions. Prerequisite: SOC 1010. Application to the BG Perspective (general education) social sciences requirement.

SOC 2100 Sociology of Religion (3). Role of religion in society; influence of religion upon society and effects of social structure on religious beliefs. Prerequisite: SOC 1010.

SOC 2310 Cultural Anthropology (3). Fall, Spring, Summer. Introduction to basic concepts and issues in the study of culture. Examines cultural variation in social organization, cultural values, and subsistence, and the differential impact of globalization. Applicable to the BG Perspective (general education) social sciences and international perspective requirements.

SOC 2680 Introductory Methodology (3). Fall, Spring. An introduction to social science research that covers the logic of research design and the basics of data collection. Other topics include formulating research questions, operationalization, questionnaire development, data collection (e.g., survey, experiment, participant observation, and content analysis), and data analysis. Prerequisite: SOC 1010 or consent of instructor.

SOC 2690 Introductory Statistics (3). Fall, Spring. Provides an introduction to core statistics concepts and techniques which are the bedrock of the social and behavioral sciences. Students will learn about the mathematical modeling of human behavior, including techniques for describing the characteristics of a sample, for stating and testing simple and complex hypotheses, and for modeling cause-effect relationships.

SOC 3000 Topics in Sociology (1-3). Courses being considered for offering on regular basis. See class schedule for listing. May be repeated. Prerequisite: SOC 1010.

SOC 3010 Social Psychology (3). Fall, Spring, Summer. How society influences the attitudes, emotions, motivation, and behavior of individuals. Topics include socialization through the life course, interpersonal attraction, social perception and cognition, self and identity, mental health, gendered behavior, aggression and altruism, and social structure and personality. Prerequisite: SOC 1010. Applicable to the BG Perspective (general education) social sciences requirement.

SOC 3020 Introduction to Sociological Theory (3). Fall, Spring. Classic and contemporary theories of sociology addressing questions about the relationships between individuals and societies; the creation and maintenance of social inequalities; the ways that institutions structure human behavior; and change and stability in societies. Prerequisite: SOC 1010.

SOC 3120 Population and Society (3). Fall, Spring. Population growth and distribution. Domestic and international perspectives on migration, fertility (births), and mortality (deaths). Prerequisite: SOC 1010 or consent of instructor. Applicable to the BG Perspective (general education) social sciences requirement. Approved for distance education.

SOC 3130 Fertility and Family Planning (3). 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, unmarried childbearing, sex education, and related public policies. Prerequisite: SOC 1010.

SOC 3160  Minority Groups (3). Fall, Spring, Summer. Analysis of privilege and oppression and how they were created and are maintained at the institutional level as well as how they are experienced at the interpersonal and individual levels in the U.S. Prerequisite: SOC 1010. Applicable to the BG Perspective (general education) cultural diversity in the United States requirements.

SOC 3170  Social Stratification and Poverty (3). Dimensions of social inequality in the US and globally, with an emphasis on theories of stratification; the various social classes in contemporary U.S. society; intergenerational mobility; and how inequality is legitimated and maintained. Prerequisite: SOC 1010.

SOC 3190  Alcohol and Public Policy (3). Social aspects of alcohol use and abuse, with a special focus on college drinking patterns. Topics include fact and fiction about alcohol, social characteristics of drinkers and non-drinkers, the framing of alcohol abuse as alcoholism, college binge-drinking, and policies to reduce the incidence and harms of alcohol abuse including prevention, treatment, and harm reduction. Prerequisite: SOC 1010.

SOC 3400  Deviance and Social Control (3). Fall, Spring, Summer. Study of the ways social groups attempt to control behaviors, ideas, and conditions that they find intolerable. Theory and research on norm creation, deviant identity, social power, and effects of social control. Topics may include mental disorders, organizational deviance, appearance, sexuality, and subcultures. Prerequisite: SOC 1010. Applicable to the BG Perspective (general education) social sciences requirement.

SOC 3410  Juvenile Delinquency (3). Fall, Spring, Summer. Introduction to theory and research on juvenile delinquency and its control from both historical and contemporary perspectives. Definitions of delinquency; the measurement, extent, and correlates of delinquency; explanations of delinquent behavior; and an introduction to informal and formal social control of delinquency. Prerequisite: SOC 1010.

SOC 3610  The Family (3). Fall, Spring, Summer. Sociological perspectives on families. Emphasis on how social forces, such as the economy, education, norms and values, and the government (e.g. marriage and divorce laws, mass incarceration), affect families as a social institution as well as individual family members. Topics include mate selection, sexuality, marriage and cohabitation, singlehood, childbearing, parenting, work and family, divorce, remarriage, stepfamilies, and families in later life. Prerequisite: SOC 1010. Applicable to the BG Perspective (general education) social sciences requirement.

SOC 3710  Applied Survey Research (3). 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. Prerequisite: SOC 1010, SOC 2680 and SOC 2690 or consent of instructor.

SOC 4040  Sociology of Aging (3). Fall, Spring. Understanding of sociological perspectives on how age and aging affect human behavior focusing on later life. Scientific explanations of how social, biological, and cognitive changes influence experiences of aging. Topics include living arrangements, family ties and intergenerational relations, economics, retirement, widowhood, grandparenthood, health and well-being, and social policies such as social security and Medicare. Critical focus on disparities by gender, social class, race/ethnicity. Prerequisite: SOC 1010.

SOC 4140  Environmental Sociology (3). Examines the relationship between humans and the natural world, emphasizing how people contribute to, and are shaped by, environmental problems with global and local consequences. Introduces theoretical perspectives, key concepts, and research in the social response to environmental issues and problems; examines how environmental problems come to be recognized, the dimensions of specific problems, and sociological ways of understanding them. Prerequisite: SOC 1010.

SOC 4170  Sociology of Sport (3). Sociological concepts and theories to investigate both the beneficial and problematic roles sport plays in society, its relationship with other institutions and how its meaning and value to individuals and communities is socially constructed. Prerequisite: SOC 1010.

SOC 4190  Population and Development (3). Sociological approaches to understanding relationship between population trends and poverty in developing societies. Issues include food supplies, birth control, urbanization.

SOC 4200  Introduction to Demographic Techniques (3). 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 2680, and SOC 2690, or consent of instructor.

SOC 4270  Introduction to Applied Demography (3). 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  Criminology (3). Fall, Spring, Summer. What is crime and why does it happen? Exposition of historical and contemporary criminological theories. Foundations include definitions of crime and
delinquency, methodological issues, and standards of theory building and testing. Explanations of crime causation include classical, social control, self-control, learning, and strain theories developed from a range of disciplinary approaches (biological, psychological, sociological, economic, integrated, and developmental). Prerequisite: SOC 1010.

SOC 4420 Crime and Punishment (3). Fall, Spring. Historical, philosophical, and sociological analysis of strategies and institutions designed to punish and change the behavior of criminal offenders. Prerequisite: SOC 1010.

SOC 4450 Soc Perspectives Interpersonal Violence (3). Spring. Survey of science and social 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 Sociology of Gender (3). Fall, Spring. Theory and research on gender in contemporary U.S. society and beyond. Evaluation of social construction of masculinity, femininity, and gender identity as well as gender as a structure in major social institutions including families, peers and schools, work and occupations, politics, violence, health/illness, sexuality, and the media. Emphasis on how experiences of gender differ by social class, race/ethnicity, sexual orientation, and age. Prerequisite: SOC 1010 or WS 2000. Credit only allowed for one of SOC 4600 or WS 4600.

SOC 4610 Sociology of Family Violence (3). Fall, Spring. Current research and theoretical perspectives on family conflict and violence. Topics include victimization and perpetration of intimate partner violence (physical, sexual, psychological, or financial abuse), incest, sibling conflict, child abuse, elder abuse, and stalking. Prerequisite: SOC 1010.

SOC 4700 Readings and Research (1-8). Fall, Spring, Summer.

Supervised independent work in selected areas. Extensive reading of more advanced literature or individually planned research project. May be repeated, but cannot exceed a total of 6 hours. Prerequisite: 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 Applied Sociology Experience (1-6). Fall, Spring, Summer. Supervised field experience in an applied sociology setting (e.g., research center, population bureau). May be repeated. Only five hours may be applied to SOC major or minor. Prerequisite: 12 hours in SOC. Graded S/U.

SOC 4800 Sociology Capstone (3). Integrate knowledge from previous sociology courses, develop research skills to answer sociological questions, understand and become engaged with the research process, and help envision advanced study and job opportunities after graduation. Prerequisite: SOC 2680 and SOC 2690, or instructor’s permission. Required for all sociology majors and encouraged for sociology minors.

SOC 4890 Internship (1-5). Fall, Spring, Summer. Course credit for practical field experience related to sociological study. Placements are often, but are not limited to, work experience in criminal justice, human services, community planning, and survey research. May be repeated with permission of advisor. Only five hours may be applied to SOC major or minor. Prerequisite: 12 hours in SOC. Graded S/U.

SOC 4950 Workshop on Current Topics (1-4). Intensive educational experience on selected topics. Typically, a concentrated time and intensive workshop format. May be repeated if topics differ, on approval of advisor.

SOSC – Social Science

SOSC 1010 Introduction to the Social Sciences (3). Fundamental concepts and methods in the social sciences.

SOSC 2890 Human Services Practicum (3-4). 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.

SOWK – Social Work


SOWK 2280 Diversity, Oppression and Social Justice (3). Spring. Examines the influence of diversity on identity development and human experience. Central to the course is an analysis of how human differences serve as a basis for inequality and injustice. Informed by this analysis, we explore the methods that social workers use to achieve social justice. Prerequisites: SOWK 1100, SOWK major standing, or Firelands Human Services major.

SOWK 3000 Social Work Research Methods (3). 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 Social Welfare Institutions (3). 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 or consent of instructor.

SOWK 3200 Human Behavior and the Social Environment I (3). 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, SOC 1010, and PSYC 1010.

SOWK 3210 Human Behavior and the Social Environment II (3). 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 3120 Social Policy (3). 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 3120.

SOWK 3250 Social Work Practice I (4). Fall and Spring. Components of generalist social work practice; needs and strengths identification, assessment, intervention strategies with emphasis on direct (micro) practice, evaluation. Includes an off-campus experience in social work setting which integrates theory with practice assignments. Prerequisites: junior standing, social work major and DHS 3300.

SOWK 3290 Social Work Practice II (3). Fall, Spring. Builds competencies for generalist practice with small groups. Examination of the various types of groups encountered in practice and the conceptual frameworks needed for understanding group process. Special emphasis is placed on working with groups from disenfranchised and vulnerable populations. Prerequisites: social work major, DHS 3300, SOWK 3250. Can be taken concurrently with SOWK 4060.

SOWK 4000 Topics in Social Work (1-3). On demand. Courses being considered for offering on regular basis. May be repeated.

SOWK 4060 Practice III (3). 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. Prerequisite or corequisite: Social Work major and SOWK 3250.

SOWK 4100 Mental Health (3). Fall. The course presents students with an introduction to the knowledge essential for generalist practice in the mental health field. Various theories and models of mental illness are presented, with an emphasis on a holistic, strengths model as a foundation for social work practice. Services offered for the prevention and treatments of mental illness are examined, especially case management within a community mental health context. Prerequisites: major standing or permission of instructor.

SOWK 4200 Social Work with Older Adults (3). Fall. Focus on the interactive nature of physical, social, psychological, cultural, and spiritual aspects of aging and the effects on the total well-being of older adults. Prerequisites: major standing or instructor permission.

SOWK 4230 Field Instruction (12). 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 Integrative Seminar (3). Fall, Spring. Faculty and field instructors jointly 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 Independent Study (1-3). 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.

SPAN - Spanish

SPAN 1010 Elementary Spanish I (4). 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 Elementary Spanish II (4). 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 Intermediate Spanih I (3). 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 Intermediate Spanish II (3). 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 Spanish Cultural Readings IV (3). Fall, Spring. Development of reading comprehension in Spanish using cultural materials concerning Spain and Spanish America. Conducted in English. Prerequisite: SPAN 2020 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. Approved for distance education.

SPAN 2200 Language and Culture Through Community Living (2). 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 Hispanic Songs (1). 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 Hispanic Folk Dancing (1). Traditional dances of Spain and Spanish America, especially those of Mexico and Colombia. 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 Introduction to Latin American Culture Studies (3). 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. Approved for distance education.

SPAN 3000 Preparation for Study in Spain (1). Fall, 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 semester, following program application deadline. Graded S/U.

SPAN 3510 Spanish Composition and Conversation I (3). Development of skills in speaking and writing, with appropriate grammar review. Prerequisite: SPAN 2020.

SPAN 3520 Spanish Composition and Conversation II (3). Continued development of skill in speaking and writing, with appropriate grammar review. Prerequisite: SPAN 2020.

SPAN 3660 Foundations in Hispanic Literature (3). Introductory survey of outstanding authors, works and movements of literature written in Spanish with emphasis on continued development of skill in speaking, reading, and writing. Prerequisite: SPAN 3510, 3520, or consent of instructor.

SPAN 3760 Foundations in Hispanic Civilization (3). Fall, Spring. Introductory survey of political, social, intellectual, artistic development of Spanish-speaking countries. Prerequisite: SPAN 3510, 3520 or consent of instructor.

SPAN 3790 Readings in Hispanic Studies (1-3). Fall, Spring, Summer. 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 Topics in Hispanic Studies (3). 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 Selected Topics in Spanish (3). 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 3820 Topics in Hispanic Literature (3). Fall, Spring. Select study of authors, movements, genres, or works of Spanish-speaking countries with emphasis on continued development of speaking, writing, and reading skills. May be repeated up to 9 hours if topics clearly differ. Prerequisite: SPAN 3660, 3760 or consent of instructor.

SPAN 3830 Topics in Hispanic Film (3). Fall, Spring. Select study of directors, movements, national traditions or works of Spanish-speaking countries with emphasis on continued development of speaking, writing, and reading skills. May be repeated up to 9 hours if topics clearly differ. Prerequisite: SPAN 3660, 3760 or consent of instructor.

SPAN 3840 Topics in Hispanic Culture (3). Fall, Spring. Selected study of issues, themes, or cultural phenomena of Spanish-speaking countries with emphasis on continued development of speaking, writing, and reading skills. May be repeated if topics clearly differ up to 9 hours. Prerequisite: SPAN 3660, 3760 or consent of instructor.

SPAN 3850 Topics in Language and Culture (3). Fall, Spring. Selected study of intersections of language and culture in Spanish-speaking countries with emphasis on continued development of speaking, writing, and reading skills. May be repeated up to 9 hours if topics clearly differ.
Prerequisite: SPAN 3660, 3760 or consent of instructor.

SPAN 3950 Workshop in Spanish (1-3). 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 Latin American Culture Studies Seminar (3). 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 Exploring Latino/a and Latin American Culture through Service-Learning (3). 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 Spanish American Fiction (3). 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 Medieval and Golden Age (3). Representative masterpieces of Spanish literature from the Middle Ages and the Siglo de Oro: Epic, poetry, novel and theater. Prerequisite: SPAN 3670.

SPAN 4420 Spanish Literature of the Nineteenth Century (3). Outstanding works of the 19th century; romanticism, realism, naturalism, prose and poetry. Prerequisite: SPAN 3670.

SPAN 4440 Contemporary Spanish Literature (3). Outstanding works from the generation of 1898 to the present; poetry and prose. Prerequisite: SPAN 3670.

SPAN 4500 Advanced Grammar and Composition (3). Grammar and composition, especially appropriate for future teachers of Spanish. Prerequisites: SPAN 3510 and SPAN 3520.

SPAN 4510 Advanced Conversation (1). Fall, Spring, Summer. Intensive conversation practice on selected topics. Prerequisites: SPAN 3510 and SPAN 3520 or consent of instructor. May be repeated up to 9 hours.

SPAN 4550 Applied Linguistics (3). 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 Career Spanish (3). 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 Readings in Hispanic Literature (1-3). 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 Spanish-American Literature I: Discovery to Modernism (3). Representative authors from the Chroniclers through the Romanticists; prose and poetry. Prerequisite: SPAN 3680 or consent of instructor.

SPAN 4820 Spanish-American Literature II: Modernism to the Present (3). Representative authors from Modernism and subsequent 20th-century literary developments; prose and poetry. Prerequisite: SPAN 3680 or consent of instructor.

SPAN 4870 Seminar in Hispanic Linguistics (3). Intensive study of one of the following topics: bilinguality, Spanish as a heritage language, Spanish in contact with other languages, Spanish in the United States, Spanish language politics or other topics relevant to the field of Hispanic linguistics. May be repeated if topics clearly differ. Prerequisites: SPAN 3510 and SPAN 3520 or consent of instructor.

SPAN 4880 Contemporary Mexican Literature (3). Outstanding works of the 20th century. Prerequisite: SPAN 3680 or consent of instructor.

SPAN 4890 Hispanic Studies (3). 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. Extra Fee.

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STAT – Applied Statistics


STAT 2110 Elementary Statistical Methods I (3). 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 Elementary Statistical Methods II (3). Estimation, hypothesis testing, regression, correlation, analysis of variance and contingency tables. Prerequisite: C or better in STAT 2110 or equivalent.

STAT 2200 Elementary Business Statistics (5). 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 Regression Analysis (3). Fall. Linear, nonlinear and multiple regression and correlation analysis. Prerequisite: Prior credit in STAT 2120 or MATH 4410 is required for enrollment. Students in pre-BSBA, BSBA conditional, or NOADMIT plans are not eligible to enroll.

STAT 4060 Sample Design (3). 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 Experimental Design (3). Spring. Constructing statistical designs and analyzing resulting data; basic experimental design and analysis of variance. Prerequisite: MATH 4410 or consent of instructor.

STAT 4120 Applied Nonparametric Statistics (3). Nonparametric approach to testing hypotheses; contingency tables, goodness of fit, procedures based on ranks. Prerequisite: MATH 4410 or consent of instructor.

STAT 4140 Statistical Quality Control (3). 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 Time Series Analysis (3). 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 4440 Data Mining in Business Analytics (3). Fall, Spring. Data mining is the analysis of large data sets for the purpose of discovering useful information. This course will cover a variety of data mining applications and algorithms. Topics include regression trees, classification trees, clustering, discriminant analysis, neural networks, link analysis and market basket analysis. Students will be exposed to applications in business (finance, insurance, manufacturing, marketing), crime detection (identifying criminal patterns, fraud detection), and science (analysis of scientific data). Prerequisite: STAT 2120 and OR 3800 or permission of instructor.

STAT 4910 Studies in Statistics (1-3). 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.

TCOM - Telecommunication

TCOM 1030 Media and the Information Society (3). 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 Student Media Participation (1). 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 Radio and Television Production for Non-TCOM Majors (3). 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. Not open to TCOM majors. Extra fee.

TCOM 2600 Writing for Electronic Media (3). 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.

TCOM 2610 Interactive Television and Video Production (3). Fall, Spring. Introduces students to the fundamentals of electronic media production and editing in the single-camera format. Through a combination of lecture, readings, discussion, and directed lab exercises, students will be involved with fundamentals of still-camera composition and story-telling, single-camera video camera acquisition of picture and sound, computer video editing basics, and Internet/website posting of electronic video media. Prerequisite: TCOM 1030 and co-requisite TCOM 2600 (may be taken simultaneously with TCOM 2600). Nonmajors by permission only. Extra Fee.

TCOM 2620 Interactive Radio Production (3). Fall, Spring. Style and basic principles and practices of announcing; theories and processes of audio production and distribution, including webcasting, podcasting and basic interactive concepts frequently employed by radio stations. Prerequisite: TCOM 2600. Extra Fee.

TCOM 2630 Multi-camera Television Production (3). Spring and on demand. 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 and 2610 and TCOM major, or by permission of instructor. Extra Fee.
TCOM 2640  Interactive Online Media (3). Fall, Spring, Summer on demand. Practical and conceptual issues associated with interactive media with emphasis on the internet and online media. Basics of web design integrated with social science perspectives on interactive online media. Prerequisite: TCOM 2600.

TCOM 2650  Internet Applications for the Telecommunications Industry (3). On demand. Internet-based software applications that are affecting the telecommunications 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  Topics in Minorities and Film/Video (3). 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.

TCOM 2900  Documentary Research & Writing (3). Fall. This course emphasizes the development of writing skills for documentary productions in a range of electronic media formats. Students will learn the essential research methodologies required for documentary preproduction such as in-depth content research, field scouting, preliminary interviewing, and the development of a bibliography and portfolio of support materials. Students also will learn the basic documentary theories that frame the historical development of different types of factual presentations of societal, cultural, and political storytelling.

TCOM 3000  America’s Documentary Story to 1968 (3). Fall. This course examines electronic media documentaries from technological precursors, through emergence of documentary media in radio, television, and other electronic media, including relationship to American history during the same period. Through lecture, readings, viewings, and discussion, students will learn the major figures, technologies, programs, and issues related to documentary through 1968. May be taken simultaneously with TCOM 2900.

TCOM 3100  Documenting Human-Global Challenges after 1968 (3). Spring. This course considers 1968 as a change year resulting from the Tet Offensive; President Johnson’s withdrawal from the presidential race; assassinations of Martin Luther King, Jr. and Robert Kennedy; the split in the civil rights movement; Democratic National Convention in Chicago; and election of Richard Nixon. Through lectures, readings, and viewings students will learn about new television magazine formats, documentary series on network and public television, and 1980s changes in broadcast regulation. May be taken simultaneously with TCOM 2900.

TCOM 3500  Scriptwriting (3). 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 3520  Online Social Media (3). On demand. This course examines applications and implications of online social media. Social psychological perspectives of online social media will be primarily examined, but the subjects of discussions and readings are not limited to those perspectives. Approved for distance education.

TCOM 3550  Global Telecommunication Systems (3). 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: Junior standing required.

TCOM 3600  Media Research (3). 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. Prerequisite: Junior standing required.

TCOM 3610  Media & Strategic Communication (3). On demand. This course surveys a broad spectrum of strategic communication including different communication tools and techniques, audience research, message strategies, and traditional/non-traditional media choices in the contexts of traditional product/service promotion, politics, and the non-profit sector. Prerequisite: TCOM 1030 or JOUR 1000.

TCOM 3640  Video Field Production, Editing and Online Distribution (3). Fall and on demand. Field experience in content creation and production. Focus on single-camera, film-style video production. Includes equipment handling, artistic and aesthetic composition, and nonlinear editing, and production management. Laboratory hours. Prerequisite: TCOM 2600 and TCOM 2610, and TCOM major, or by permission of instructor. Extra Fee.

TCOM 3650  Broadcasting History (3). Fall. Current U.S. broadcasting with view of antecedents in regulations, economics, programs, audiences, stations, networks, technology and employment.

TCOM 3660  Media Effects (3). Fall, Spring, Summer. Theories and research studies of media effects. Critical examination of opposing viewpoints. Prerequisite: Junior standing required.

TCOM 3680  Intermediate Radio Production and Performance (3). Fall. Development of program ideas and application of advanced recording techniques. Responsible for all stages of planning, writing, directing and marketing. Individual program projects for possible use on WBGU or WFAL. Prerequisite: TCOM 2600 and TCOM 2620. Extra Fee.
TCOM 3950 Workshop on Current Topics (1-3). 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 Topics in Documentary Studies (3). 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: Sophomore standing.

TCOM 4390 Topics in Sport Telecommunications (3). On demand. Provides an interdisciplinary approach to the critical analysis of sport with an emphasis on contemporary sport issues and events as well as sport history. Focus on the role of media, communication, society, and ideology in the production of sport culture. Practical application of skills necessary to work in various sport broadcast industries may be taught through sport broadcast writing, sportscasting and announcing, or relevant video, audio, or online production. May be repeated once for different topics. Prerequisites: TCOM 2600, non-majors with approval of instructor. Approved for Distance Education.

TCOM 4530 Media Sales and Promotion (3). 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 4600 Media Policy and Industry (3). Fall, Spring. Theoretical approaches to key policies and regulations shaping activities in the telecommunications industry. We also analyze how they affect the media industry such as ownership and access. Applied study of policy and regulatory issues in broadcasting, cable, telephony, Internet and mobile media. Prerequisites: Junior standing required. Approved for distance education.

TCOM 4610 Audience Research (3). 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. Credit cannot be earned in both this course and MC 5610. Prerequisite: TCOM 2600.

TCOM 4630 Media Programming (3). Fall. Audience behavior, program genre and the structure and procedures of the media industry in the selection, scheduling and evaluation of radio, television, cable programs, web sites and mobile media content, and how to market and promote media content across platforms. Credit cannot be earned in both this course and TCOM 4630. Prerequisites: TCOM 2600. Approved for distance education.

TCOM 4640 Practicum in Interactive Online Media Production (3). Spring. Advanced level interactive media production. Course topics, examples, and assignments are related with contemporary interactive media skills. Assigned practices of interactive media production.

TCOM 4660 Television and Film Criticism (3). On demand. Critical frameworks, approaches and theories of theatrical, documentary and avant-garde films, video, and creative television productions. Function, content, and style of film and television criticism. Emphasis on criticism and critical methodology. Prerequisite: Junior standing required.

TCOM 4670 Gender, Media & Culture (3). 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 Advanced Directing and Producing (3). 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 Seminar: Contemporary Aspects of Telecommunications (1-3). 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 4750 Electronic Surveillance and Privacy (3). 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. In-depth analysis of various modes of electronic surveillance. Evaluation of North American and European privacy policy frameworks. Credit cannot be earned in both this course and MC 5700.

TCOM 4860 Critical Studies in Media Environments (3). 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.
TCOM 4890 Internship in Telecommunications (1-3). 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 Problems in Telecommunications (1-3). 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.

TCOM 4911 Media Management (3). Spring. Function, management theories and practices, organizational structure, media business models, and procedures involved in the operation of the telecommunication industry and electronic media. Prerequisite: TCOM 2600 and senior standing or permission by instructor.

TCOM 4912 Advanced Radio Production Practicum (3). Spring. Focus on advanced recording techniques, practices and the development of long form audio narratives, with the intention that projects are suitable for broadcast and distribution via WBGU, WFAL or other suitable communication channels. This course is project oriented. Prerequisite: TCOM 2600, TCOM 2620 and TCOM 3680 or permission of department. Extra Fee.

TCOM 4913 Video Practicum (3). Fall. Directed experience by instructor in collaboration with expert or skilled professional having specific expertise in the execution of a proposed project. Instructor will assign one directed study, one collaboration with a supervising expert, and one assignment produced independently by the student under the expert’s direction and based on the production/research proposal. Prerequisites: Students must present an admittance portfolio or production/research proposal to qualify for this class and have completed TCOM 2630, 3640, and 4680. Extra Fee.

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**TE – Technology Education**

**TE 2520 Elements of Instruction (3).** 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 Instructional Scope and Sequence (3).** 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 Teaching Technology Systems (3).** 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 Organization and Administration (3).** 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 Teaching Design and Engineering: Innovation/Production (3).** 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. Extra fee.

**TE 4620 Career and Technology Education in Elementary Schools (3).** Fall odd years. Development and evaluation of instructional activities to facilitate career development and understanding of technology among elementary children. Extra fee.

**TE 4770 Technology Education Practicum (2).** 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 Problems in Technology Education (1-3).** For advanced students wanting to conduct intensive study of selected problems in technology education. May be repeated. Prerequisite: consent of college.

**TE 4970 Student Teaching (1-16).** 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.
**TECH - Technology**

**TECH 1010 Technology I (3).** 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 Special Topics (1-3).** 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 1940Q Inquiry in Science and Mobile Technology (3).** Various thematic topics. Investigation into the impact of technological change in societies. Particular emphasis on forecasting and assessing the diffusion of current and emerging mobile/Internet technologies in different industries, and examining the often unintended consequences associated with this diffusion. Prerequisite: Open only to freshman and sophomore students.

**TECH 2230 Mechanical Power Transmission (3).** 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 Quality Systems (1-3).** 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 Developments in Technology (1-3).** 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. Approved for Distance Education.

**TECH 2890 Cooperative Education (4).** 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 Studies in Technology (1-3).** 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 Field Experience (1-3).** 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 3000 Computer-mediated Communications in Training and Education (3).** 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 distance learning environments. TECH 3000 has been developed and approved for distance education.

**TECH 3020 Technology Systems in Societies (3).** 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 3200 Adult Learning in Technological Settings (3).** 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 3200 has been developed and approved for distance education.

**TECH 3890 Cooperative Education (4).** 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 Technology Workshop (1-3).** Intensive educational experience in a specialized technology. Typically an all-day or concentrated format. Requirements usually completed within time format. May be repeated.

**TECH 4000 Supervisory Practices in Technological Settings (3).** 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 4000 has been developed and approved for distance education.

**TECH 4020 Innovation in Technology (3).** 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 4100 Transformational Learning and Technology (3).** 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. TECH 4100 has been developed and approved for distance education.

**TECH 4210 Technological Forecasting (3).** 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. Approved for distance education.

**TECH 4220 Information Policy Analysis (3).** 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. Approved for distance education.

**TECH 4230 Digital Rights Management Perspectives (3).** 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. Approved for distance education.

**TECH 4240 Media Usability Studies (3).** 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. Approved for distance education.

**TECH 4300 Development of Training Programs (3).** 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 4300 has been developed and approved for distance education.

**TECH 4310 Instructional Materials Development (3).** 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 4310 has been developed and approved for distance education.

**TECH 4320 Evaluation and Assessment within Technology (3).** Principles and procedures used in the measurement, evaluation, and assessment of educational programs involving individuals, groups, programs, and systems within a technology setting. TECH 4320 has been developed and approved for distance education.

**TECH 4330 Instructional Design and Delivery (3).** Learning styles, reading levels, philosophies of learning and education, instructional delivery methods, instructional techniques and evaluation instruments. TECH 4330 has been developed and approved for distance education.

**TECH 4500 Seminar in Learning Design and Technology (3).** Students reflect on how well their experience and coursework has prepared them to achieve the University and the LDT Program Learning Outcomes. Students will assess their overall strengths and weaknesses and how well they have managed technologically driven workplace changes. Students consider the global impact of technological change on people, economies and societies in general. Students examine their learning and growth in the context of their personal and professional aspirations. To be taken concurrently with the students' last major course(s). Approved for distance education.

**TECH 4800 Topics in Technology (1-3).** 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. Approved for distance education.

**TECH 4890 Cooperative Education (4).** 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 Problems in Technology (1-3).** 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 Technical Research Project (4).** 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.

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**THFM – Theatre & Film**

**THFM 99 Major Event Participation (0).** Fall. Required once of all Theatre Majors of sophomore or junior standing and once for all Theatre Majors in their senior year. Students will take part in an adjudicated audition/interview process scheduled at the end of the fall semester. Graded S/U.

**THFM 1000 Production Participation: Acting I (1).** 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 Production Participation: Tech I (1). Fall, Spring. Studio course for students participating as a technician in departmental productions. May be repeated to 4 hours.

THFM 1380 Solo and Ensemble Theatre Performance Activities I (1). 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 The Theatre Experience (3). 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 Basic Scenery Construction, Props and Scene Painting (2). 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 Basic Costume Construction (2). 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 1490 Basic Stage Lighting and Sound (2). Spring. Tools, equipment and techniques used in basic stage lighting and audio practice: including lighting instruments, dimmers, control boards, distribution; microphones, signal sources, speaker types, processing, mixing and recording. Emphasis is placed on practical application through the department's production program. Laboratory hours required.

THFM 1500 Drafting, Drawing, and Graphics for Theatre and Film (2). 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 Introduction to Film (3). Fall, Spring, Summer. Introduces students to the critical study of film as entertainment and art, as well as both a commercial and a cultural product. Provides students with an overview of the basic theories and methodologies used to study narrative, documentary and experimental films, and examines the medium of film within an aesthetic, social and industrial context. Using a combination of approaches to viewing, analyzing and writing about movies, this course also considers how films use various cinematic techniques to communicate meaning to viewers. Applicable to the BG Perspective (general education) Arts and Humanities requirement. Extra Fee.

THFM 1710 Applied Aesthetics for the Moving Image (3). Fall, Spring. This course serves as an introduction to moving image aesthetics, tools, and techniques through the creation of original moving image work with an emphasis on achieving basic aesthetic and technical literacy. Required for film production and film studies majors.

THFM 1910 Script Analysis (3). 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 Performance Studies I (3). Fall, Spring, Summer. Introduction to solo performance through textual, cultural, and rhetorical approaches with emphasis on vocal and physical techniques of performance. Applicable to the BG Perspective (general education) arts and humanities requirement.

THFM 2150 Exploring Cultural Diversity Through Performance (3). 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 2300 Theatre for Young Audiences (3). Spring. Introduction to creating theatre for child audiences in public and educational settings. Application of concepts of child development to aesthetic of theatre for young audiences, through readings, discussion and participation.

THFM 2400 Performance for Entrepreneurs (3). 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 Acting: Principles (3). Fall, Spring. Basic techniques of acting applied to creating contemporary characters in realistic situations; imaginative, emotional and sensory responsiveness. Prerequisites: THFM 1910 or consent of instructor. THFM 1910 and THFM 2410 may be taken concurrently.

THFM 2420 Acting: Topics in Voice and Movement (3). 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. Prerequisites:
THFM 1910 and THFM 2410 or consent of instructor. THFM 1910, THFM 2410, and THFM 2420 may be taken concurrently.

THFM 2550 Film I: Cinematography (3). 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: C or better in all of the following: THFM 1610, THFM 1710, THFM 1910, THFM 2620; open to film majors only; open by permission of instructor. Extra fee.

THFM 2560 Film II: Editing, Image, and Sound (3). 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 History of Film (3). Fall, Spring. Survey course examining the history of aesthetic, technological and industrial developments in cinema from its origins to the present. Traces the influence of major stylistic movements and production, distribution and exhibition practices within U.S. cinema, as well as other selected national cinemas across the world. Special consideration is given to the social, cultural, political, and historical contexts within which evolutions in filmmaking technology and film aesthetics have taken place, as well as to the intersections between industrial practices and technological and aesthetic advances. Prerequisite: THFM 1610.

THFM 2720 Mid-Major Portfolio Review (1). Fall, Spring. Required of all film majors who are second semester sophomores, first semester juniors or first semester transfer students of junior standing. Students take part in an in-house assessment of portfolios that document their work in lower division film courses. The course is designed to prepare students for the in-house assessment and facilitate their success in upper division film courses, and co/extra curricular film experiences.

THFM 2750 Arts Management I (3). 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 2750H Arts Management I (3). 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 Studies in Theatre and Film (1-3). 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 Production Participation: Acting II (1). 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 Production Participation: Tech II (1). Fall, Spring. Studio course for advanced students participating as a technician in departmental productions. Meeting times arranged by instructor. May be repeated to 6 hours.

THFM 3020 Performance Studies II (3). On Demand. Explorations of various forms of performance such as the performance of social justice, cultural performance, or performance adaptation and/or composition. May be repeated for six hours when topic varies. Prerequisite: THFM 2020 or consent of instructor.

THFM 3300 Theatrical Makeup (3). Fall. Theory and application of makeup for stage, television and film, corrective and character makeup; prosthetics; facial hair.

THFM 3380 Solo and Ensemble Theatre Performance Activities II (1). 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 Creative Drama (3). 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 Directing (3). Fall, Spring. Theory and techniques of play direction. Each student directs a short scene. Prerequisites: THFM 1910, THFM 2410, and Junior Standing, or consent of instructor.

THFM 3420 Advanced Directing (3). Spring. THFM 3410 continued. Each student directs at least one short play or series of short scenes. Prerequisite: THFM 1910, THFM 2410, THFM 3410 and Junior Standing, or consent of instructor.

THFM 3440 Acting: Character and Range (3). Fall. 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  Acting: Topics and Applications (3). Spring. 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, and THFM 3440, or consent of instructor.

THFM 3470  Theatre History and Literature: Origins-1700 (3). 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  Theatre History and Literature: 1700-Present (3). 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  Milestones in Black Theatre (3). Spring. Read, research and discuss/report on the aesthetics, dramatic intent, historical significance and production history of milestone black plays.


THFM 3550  Film III: Sync Sound Production (3). 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  Tree House Troupe--Rehearsal (3). Fall. 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. Prerequisite: THFM 3400 or consent of instructor.

THFM 3610  Tree House Troupe--Tour (3). Fall. 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. Prerequisite: THFM 3400 or consent of instructor.

THFM 3650  Culture and the Moving Image (3). 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  Arts Management II (3). 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 3950  Workshop on Current Topics (1-3). 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 4430  Playwriting (3). 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  Acting and Directing for Film (3). Spring. 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 1910 and THFM 2410 or THFM 2550.

THFM 4450  Acting: Songs and Arias (3). 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  Summer Theatre Performance (1-6). 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  Summer Theatre Production (1-6). 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 Contemporary Issues in Theatre (3). 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 Summer Theatre Management (1-6). 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 International Puppetry: Traditions and Innovations (3). Spring. This course provides an overview of the traditional genres, literature, and significant contemporary artists within the puppetry discipline.

THFM 4600 Period, Style and Form (3). Fall. Historical overview of decorative arts in their social context for application in productions.

THFM 4610 Puppets and Masks: Design and Craft (3). Fall. This course introduces students to the design approaches, construction techniques and materials necessary to produce masks and puppets for theatrical purposes.

THFM 4620 Puppetry Performance (3). On demand. This course introduces students to a variety of puppet manipulation and performance techniques suitable for presentation before a live audience.

THFM 4630 Lighting Design (3). Fall. Theories and techniques of lighting stage productions; lighting instruments and equipment.

Prerequisite: THFM 1490 or permission of instructor.

THFM 4650 Stage Management (3). 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 Scene Design (3). 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 Scene Painting (3). 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 Animated Films: An International History (3). Fall, 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 Costume Design (3). 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.

THFM 4720 Advanced Production Practicum (2). 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.) May be repeated twice for a total of four hours.

THFM 4850 Topics in Film, Theatre, and Performance Studies (3). 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 Theatre and Film Studio Experiences (1-12). 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 Theatre and Film Internships (1-12). 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 Problems in Theatre and Film (1-3). Fall, Spring, Summer. For advanced student who wishes to do intensive study in theatre or film, independently or in conjunction with courses regularly offered. May be repeated. Prerequisite: consent of theatre and film department.

THFM 4920 Senior Portfolio Review (1). Fall, Spring. Required of all film majors of senior standing. Students take part in a professional
adjudicated interview process that involves assessment of portfolios that document their work in upper division film courses. The course is designed to prepare students for the professional adjudication experience and facilitate their success after graduation. Prerequisite: THFM 2720.

THFM 4980 Senior Seminar in Theatre (2). Fall. Exploration of the learning/life skills inherent in the study and practice of theatre. Major event participation required. Prerequisite: senior standing and THFM 99.

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TLEP – Tourism Leisure & Event Plan

TLEP 1900 Recreation Leadership (3). Fall, Spring. Recreation activity analysis and development; leadership theories, styles and techniques with application to the needs and interests of various populations.

TLEP 2100 Major Concepts in Recreation (3). Fall, Spring. Philosophical concepts and historical foundations; personal values of recreation; economic impact; leisure service delivery system and professional leadership.

TLEP 2150 Introduction to Tourism and Event Planning (3). Overview of the travel industry; employment opportunities, professional preparation; trends in travel; tourism data; issues in travel and tourism. Prerequisite or Corequisite: TLEP 1900 or TLEP 2100 or consent of instructor.

TLEP 2600 Leisure Services for the Older Adult (3). Fall, Spring. Characteristics of older adults; therapeutic benefits of recreation; major services and settings; program planning and administrative concerns; field visits.

TLEP 3040 Outdoor Recreation (3). Summer. Outdoor recreation resources; government management policies; private organizations and enterprise; legal, economic and political impacts; human behavioral patterns.

TLEP 3150 Event and Program Planning in Tourism (3). Program development in various tourism settings; planning special events; tour packaging and escorting. Prerequisite: TLEP major or Recreation minor, TLEP 1900, and TLEP 2100 or TLEP 2150; or consent of instructor.

TLEP 3250 Convention, Meeting, and Resort Administration (3). Exploration of analytical framework for management strategies unique to travel and tourism industry. Analysis of structure and function for integration of services. Prerequisites: TLEP major or Recreation minor, TLEP 2150 or consent of instructor.

TLEP 3800 Concepts and Techniques in Outdoor Education (4). Summer. Outdoor education through school curricula, interpretive services, recreation agencies and community action; philosophical bases; identification and utilization of resources; the methods associated with the learning process; field-based experiences.

TLEP 3840 Organization and Administration of Leisure Services (3). Basic concepts of administration, personnel management, fiscal management, public relations techniques, motivation theory, grant writing and fund raising, marketing, legal aspects of administration; budget proposal preparation and development of employment seeking skills. Prerequisites: TLEP 1900, TLEP 2100 and 30 hours.

TLEP 3850 Recreation Program Development (3). 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: TLEP 1900, TLEP 2100 and 30 hours.

TLEP 3860 Internship Preparation (1). Fall, Spring. Comparative analysis of leisure services and their roles in society with focus on personal and professional development.

TLEP 3870 Practicum: Leadership and Programming (1-5). Application of leadership and program theory to field setting. May be repeated to a maximum of six hours. Prerequisites: TLEP major, TLEP 1900 or TLEP 2100, TLEP 2150, TLEP 3150, 2.5 GPA and approval of advisor. Extra Fee.

TLEP 3950 Workshop in Current Topics (1-3). On demand. Intensive educational experience on selected topics related to recreation and tourism. Approved for Distance Education.

TLEP 4150 Evaluation and Assessment of Planning Strategies for Destination Travel and Tourism (3). Conceptual framework for planning strategies unique to travel and tourism industry. Analysis of methods and techniques with emphasis on tracking and conversion studies. Prerequisites: TLEP major or Recreation minor; TLEP 3250 or TLEP 3840, TLEP 3870, MKT 3000 and 2.50 GPA; or consent of instructor.

TLEP 4700 Independent Study (1-3). 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.

TLEP 4820 Evaluation of Recreation Services (3). Methods, techniques and application of evaluation processes. Prerequisites: TLEP 3840, TLEP 3850, TLEP major or Recreation minor, or consent of instructor.

TLEP 4830 Recreation Areas and Facilities (3). Planning and design principles; acquisition, development, construction and maintenance of specific types of recreation areas and facilities. Prerequisites: TLEP major or Recreation minor, 2.50 GPA, TLEP 3870, TLEP 3150, and TLEP 3250 or TLEP 3840; or consent of instructor.

TLEP 4840 Contemporary Issues in Tourism (3). Seminar in current issues of tourism. Prerequisites: TLEP
major or Recreation minor, 2.50 GPA, TLEP 3150, TLEP 3250 or TLEP 3840, and TLEP 3870; or consent of instructor.

**TLEP 4870 Practicum: Supervision and Administration (1-5).** Application of program, supervision and administration theory to field setting; may be repeated to maximum of six hours. Prerequisites: TLEP major, 2.50 GPA, TLEP 3870, and approval of advisor; or consent of instructor. Extra Fee.

**TLEP 4880 Internship (15).** A concentrated professional experience for students preparing for a career in tourism, leisure, and event services. Prerequisites: TLEP major, 2.50 GPA, TLEP 3250 or TLEP 3840, TLEP 3870, TLEP 4870, TLEP 4150 or TLEP 4830, and approval of advisor. Extra Fee.

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**UNIV – University Studies**

**UNIV 1000 University Success (2).** Fall, Spring. Introduction to higher education. Development of skills in oral and written communication, time and stress 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 Freshman Interest Group (1).** 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 Student Success Seminar (2).** 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 Springboard (1).** 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. Prerequisites: Open to first, second, and third-year students only.

**UNIV 1510 Multicultural Success Seminar (2).** The focus of this course is on diverse team building to support targeted populations with developing successful academic, personal, community and cultural strategies that advance the skills needed for full participation as culturally competent, intellectually engaged, lifelong learners. This interactive class builds academic skills, cultural competency skills, persistence strategies and enhances community engagement. Graded ABC/NC (No Credit) Prerequisite: Permission from the Office of Multicultural Affairs.

**UNIV 2010 Orientation Training (2).** 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 2100 Residence Life for the Paraprofessionals (1).** 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 Upper Springboard (1).** 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 Seminar for the Student Leader (1). 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 Seminar in Residence Life (1). 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 Career Implementation (3). 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 Independent Studies (1-15). 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 Advanced Residence Life for the Paraprofessional (1). 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 Springboard Coaching (1). 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.

VCT – Visual Communications Tech

VCT 1030 Introduction to Visual Communication Technology (3). 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 Problem Solving for Visual Media (3). Fall, Spring. 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. Four and one-half hours of lecture/laboratory. Extra fee.

VCT 2040 Concepts of Visual Communication (3). 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. Approved for Distance Education. Prerequisite: VCT 1030 or instructor approval. Extra fee.

VCT 2080 Introduction to Print Media (3). 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.

VCT 2660 Introduction to Interactive Media (3). 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 lab/lecture. Extra fee.

VCT 2820 Photography I (3). 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. Photographic equipment required. Extra fee.

VCT 3040 Display and Exhibit Technology (3). Fall. Display and exhibit industry from problem analysis through design and production to problem analysis and evaluation. Overview of "high-tech" media used to stop audiences and create the desired outcome. Four hours lecture and laboratory. Prerequisites: VCT 1030. Extra fee.

VCT 3080 Fundamentals of Imaging Technology (3). 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 2080 or instructor approval. Extra fee.

VCT 3090 Image Preparation for Print Media (3). Fall. Study of
imagination and image assembly and preparation for printing. Experiences in color proofing, plate preparation and process color printing are also provided. Four hours lecture/laboratory. Prerequisite: VCT 3080 or instructor approval. Extra fee.

**VCT 3100 Advanced Print Media (3).** 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. Students in Pre-VCT plans are not eligible to enroll in this course.

**VCT 3080/3660 Applied Interactive Media Production (3).** 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. Students in Pre-VCT plans are not eligible to enroll in this course.

**VCT 3690 Intermediate Video Production (3).** 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 lab/lecture. Extra fee.

**VCT 3820 Photography II (3).** 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 3820H Photography II (3).** 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 Animatronics Technology (3).** 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 4040 Research in Visual Communication Technology (3).** Spring. Applying the research process to solve problems in the VCT industry regarding systems, equipment, materials, and facilities. Advanced inquiry regarding current issues/problems will be explored. Develop proposals, presentations and/or grants for research. Prerequisite: Matriculation in VCT.

**VCT 4560 Digital Color Applications (3).** 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 Digital Photography (3).** Research and experimentation in computer-generated digital imaging techniques. Four hours of lecture/laboratory. Prerequisite: VCT 3820. Extra fee.

**VCT 4650 Commercial Photography (3).** 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 Visual Communication Technology Synthesis (3).** Fall, Spring, Summer on demand. Techniques of visual communication problem solving and project management: including project coordination, scheduling, specification analysis, scheduling, cost/estimating aesthetic and technical qualities of client projects. Four hours of lecture/laboratory. Prerequisites: Senior status and minimum of 17 hours completed in the VCT cognate. Extra fee.

**VCT 4690 Advanced Video Production (3).** 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 4800 Topics in VCT (1-3).** Topics, trends, and inquiry related to the Visual Communication Technology field including theory, technology, and professional practice utilizing systems, processes, equipment, materials, and/or facilities. May be repeated on approval of adviser up to 6 hours.

**VCT 4820 Advanced Concepts of Multimedia Production (3).** 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 Problems in Visual Communication Technology (1-3).** 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.

**WS – Women’s Studies**

**WS 1920Q Inquiry in Humanities and the Creative Arts (3).** Fall, Spring, Summer. Various thematic topics. This course will introduce students to humanities methods of inquiry used in Women’s Studies. We will discuss how feminist scholars and artists use tools from the humanities
and creative arts to formulate critical questions that allow us to explore identity and difference within specific cultural and artistic contexts. Throughout the course, we will analyze the intersection of gender with race and ethnicity in the United States and explore the ways in which the nature of inquiry is gendered. Prerequisite: Open only to Freshman and Sophomore students.

WS 1930Q Inquiry in Individuals and Society (3). Fall, Spring, Summer. Various thematic topics. This course will introduce students to social science methods of inquiry used in Women's Studies. We will use these modes of inquiry to explore topics such as: the historical positioning of groups of women, socialization into gender roles, and the effect of policy and politics on gender. Throughout the course, we will analyze the intersection of gender with race and ethnicity in the United States and explore the ways in which the nature of inquiry is gendered. Prerequisite: Open only to Freshman and Sophomore students.

WS 2000 Introduction to Women's Studies: Perspectives on Gender, Class and Ethnicity (3). 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 Special Topics in Women's Studies (3). 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 2610 Introduction to LGBT Studies (3). Fall. Exploration of a range of topics and issues emerging in the interdisciplinary area of LGBT (Lesbian, Gay, Bisexual, and Transgender/Transsexual) Studies. Course engages in cultural and textual analysis as well as consideration of specific components of LGBT Studies, including (1) major concepts and theories, (2) political, economic, and social constructs which institutionalize homophobia and heterosexism, (3) diversity issues within LGBT communities, and (4) the impact of LGBT scholarship on specific academic disciplines.

WS 2730 History of Feminist Thought and Action (3). Fall. 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. Approved for Distance Education.

WS 3000 Topics in Women's Studies (1-4). Fall, Spring. Topics of interest in studying women, gender and/or sexuality in subject area not offered in regular college course offerings. May be repeated up to 4 times if topics differ. Students may enroll in more than one section of WS 3000 in a single semester, if topics differ. No prerequisites.

WS 3010 Women, Art and Culture (3). 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. Approved for Distance Education.

WS 3050 Women of Color in the United States (3). 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 Psychology of Gender (3). 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 Global Perspectives on Women (3). Fall or Spring. An exploration of women's lives and experiences in global/local contexts. Emphasis on analytical and methodological frameworks to examine different histories, activism, borders, and ideologies shaping women's lives. Focus on Third World critiques of Western feminisms in relation to social, economic, and political structures of race, ethnicity, sexuality, gender, and class. Prerequisite: Any WS course, any ETHN 1000-level course, ETHN 2010, or ETHN 3050. Credit allowed only for ETHN 3130 or WS 3130. Approved for distance education.

WS 3270 Women in Modern Europe (3). 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 Women and Interpersonal Violence (3). 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 African Women (3). 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 3510 Topics in Sexuality Studies (1-4). Fall, Spring: Topics within the interdisciplinary field of Sexuality Studies not offered in regular college course offerings. May
WS 3610  Histories of Queer Activism (3). Spring. Exploration of the nature and function of lesbian, gay, bisexual, transgender and queer activism within the United States. Students will consider four components of queer activist agendas: activism as (1) a movement of ideas, (2) a movement of sexual freedom, (3) a political movement, and (4) culture and community.

WS 4000  Advanced Topics in Women's Studies (3). 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 4010  Practicum in Women's Studies (3-4). Fall, Spring. Capstone course examines relationship between feminist theory and practice. Apply ideas learned in previous women's studies courses and seminar readings to working with a community or national organization. Supervised practicum experience. Prerequisites: CCS 3710 or permission of the WS advisor.

WS 4330  Theories of Othered Bodies (3). 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 4420  Women in American Politics (3). Spring, Alternate years. Seminar on women's participation in American politics. Trends in women's political participation, political interest, political knowledge, and political attitudes are examined, including regional and cultural variations. Explanations for women's under-representation in elective office are explored, including differences in childhood socialization, education, workforce participation, political engagement, treatment by the media, and recruitment by political elites. Credit allowed for only one of POLS 4420/WS 4420.

WS 4450  Women's Sexualities (3). 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. Sophomore standing required.

WS 4550  Latina/o Gender and Sexuality (3). Fall, Spring. This seminar will examine constructions of gender and sexuality among U.S. Latino/a populations. We will examine the relationship between hierarchies of race, class, gender, and sexuality. Topics include family, reproductive rights, GLBT cultures. Credit allowed for only one of ETHN 4550/WS 4550.

WS 4600  Sociology of Gender (3). Fall, Spring. Theory and research on gender in contemporary U.S. society and beyond. Evaluation of social construction of masculinity, femininity, and gender identity as well as gender as a structure in major social institutions including families, peers and schools, work and occupations, politics, violence, health/illness, sexuality, and the media. Emphasis on how experiences of gender differ by social class, race/ethnicity, sexual orientation, and age. Prerequisite: SOC 1010 or WS 2000. Credit only allowed for one of SOC 4600 or WS 4600.

WS 4670  Gender, Media & Culture (3). 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 BG Perspective (general education) cultural diversity in the United States requirement.

WS 4680  Reproductive Health and Politics (3). 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.