

Bowling Green State University-- Course Descriptions as of 4/1/2010 (effective fall 2010)

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

The numbers following the title of a course indicate the minimum and maximum numbers of semester hours of credit. Because courses are offered in different formats, these numbers do not necessarily indicate the number of hours of classroom work expected.

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

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

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

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

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

Subject: Accounting	Number	Long Course Title	Min Units	Max Units	Long Description
ACCT	2000	Accounting Concepts for Nonbusiness Students	3.00	3.00	Fall, Spring, Summer. Accounting concepts and procedures and their contribution to administrative processes. Enterprise analysis, relevant data, its uses and limitations. Not applicable to preprofessional core requirements in the College of Business Administration. No credit allowed toward BSBA degree. Prerequisite: sophomore standing or consent of department.

ACCT	2210	Accounting and Business Concepts I	3.00	3.00	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	3.00	3.00	Fall, Spring, Summer. ACCT 2210 continued. Prerequisite: ACCT 2210.
ACCT	3210	Intermediate Financial Accounting I	3.00	3.00	Fall, Spring. Development and application of financial accounting concepts and generally accepted accounting principles. Preparation of financial statements and accounting for changes in accounting principles. Emphasis on valuation and cost allocation methods for assets and related effects on income statements. Prerequisite: admission to the accounting specialization or consent of department.
ACCT	3310	Cost Accounting	3.00	3.00	Fall, Spring, Summer. Cost determination and cost accounting systems. Cost analysis using regression methods. Job order, process, standard, and variable cost systems. Accounting for spoilage, service departments, and joint products. Prerequisites: STAT 2120 or STAT 2200.
ACCT	3410	Individual Income Taxation	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	Intermediate Managerial Accounting	3.00	3.00	Fall, Spring. Accounting's relationship to planning and control function. Budgeting, corporate planning models, cost-volume-profit analysis, relevant data, capital budgeting, data for operations research models, behavioral considerations, enriched variance systems, evaluation of performance and transfer pricing. Prerequisites: admission to the accounting specialization and grade of C or better in ACCT 3310, or consent of department.
ACCT	4420	Corporate Income Taxation	3.00	3.00	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	3.00	3.00	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	3.00	3.00	Fall, Spring. Auditing principles and procedures for independent verification of financial records and reviews of operations as used by internal auditors and public accountants. Nature of audit evidence, evaluation of internal controls, statistical sampling, computer auditing. Prerequisites: admission to the accounting specialization and grade of C or better in ACCT 4600, or consent of department.
ACCT	4560	Information Systems Auditing and Control	3.00	3.00	Spring. Basic concepts of information systems audit and control principles necessary to facilitate the expression of an opinion on financial statements; evaluate the effectiveness, security, and functioning of controls; prepare a meaningful management letter. Introduces a computer auditing software package and uses the software to audit computerized information. Prerequisites: C or better in ACCT 4600, MIS 4210 and MIS 4700, or consent of department.
ACCT	4600	Accounting Information Systems	3.00	3.00	Fall, Spring. General systems concepts and theory. The collection and processing of accounting information. Internal control aspects of accounting systems. Systems life cycle in an accounting framework. The interface of accounting systems and computer technology. Prerequisites: admission to the accounting specialization, MIS 2000 and C or better in ACCT 3210 or ACCT 3310, or consent of department.
ACCT	4890	Internship Seminar	1.00	3.00	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	1.00	3.00	To be arranged. Investigation in depth of selected areas or contemporary problems. May be offered individually as well as in classes depending on student needs and nature of material. Prerequisite: approval of department.

Subject: Academic Enhancement	Number	Long Course Title	Min Units	Max Units	Long Description
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ACEN	1000	College Reading/Learning Skills	2.00	3.00	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	1.00	1.00	Transition to University life through orientation to University facilities and options; activities stressing study skills and personal growth.

Subject: American Culture Studies	Number	Long Course Title	Min Units	Max Units	Long Description
ACS	2000	Introduction to American Culture Studies	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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 Ed.
ACS	3380	American Environmental History	3.00	3.00	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	3.00	3.00	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 Ed.
ACS	4850	Qualitative Research Methods	3.00	3.00	Fall. Introduces students to modes of qualitative social research commonly found in fields of ethnic studies and American culture studies. Focus on data gathering process as well as data analysis. Credit allowed only for one of ETHN 4850, ACS 4850.
ACS	4990	Capstone Tutorial in American Culture Studies	3.00	3.00	Spring. Independent study in preparation of ACS senior capstone project. Prerequisites: senior standing; tutor must be ACS joint-appointment or affiliated faculty member. Proposal, signed by proposed tutor, must be submitted for approval by undergraduate advisor in American Culture Studies prior to semester in which tutorial begins.

Subject: Accounting Technology	Number	Long Course Title	Min Units	Max Units	Long Description
ACT	2250	Electronic Bookkeeping	3.00	3.00	Use of electronic bookkeeping software including general ledger, accounts payable, accounts receivable, invoicing, payroll, purchase orders, inventory, job cost and fixed assets. Computerized accounting using commercial general ledger packages. Prerequisite: ACCT 2210 and MIS 2000 or permission of instructor.

ACT	2310	Financial Accounting	3.00	3.00	Theory and application of generally accepted accounting principles as pronounced by the Financial Accounting Standards Board (FASB) and the Securities Exchange Commission (SEC). Designed for the associate of applied business accounting program at Firelands. Prerequisite: ACCT 2210.
ACT	2410	Cost Accounting I	3.00	3.00	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	3.00	3.00	Theory and application of federal income tax as applied to the individual, sole proprietorship, partnership and corporation. Designed for the associate of applied business accounting program at Firelands.

Subject: Associate Early Childhood					
	Number	Long Course Title	Min Units	Max Units	Long Description
AEC	2000	Child Wellness	3.00	3.00	This course emphasizes the conditions necessary to promote wellness in young children (age 0-8). Primary consideration will be on health, safety, and nutrition for healthy growth and development and on analysis of the impact of family, school, and community environments in promoting the health and well-being of children.
AEC	2750	Child Care Administration	3.00	3.00	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	3.00	3.00	Methods and materials for integrating and implementing curriculum that enhances the development of infants and toddlers (ages 0-3) with diverse cultural, familial, and developmental characteristics. Supervised participation with infants and toddlers in child care settings. 80 field experience hours. Transportation required. Prerequisite: HDFS 2210.

AEC	2910	Curriculum and Methods for Preschool	3.00	3.00	Supervised participation with preschool children in a preschool setting. This experience involves methods and materials for integrating and implementing curriculum that enhances the development of preschoolers (ages 3-5) with diverse cultural, familial, and developmental characteristics. Weekly seminar. 120 field experience hours. Transportation required. Prerequisites: HDFS 2210, HDFS 3030, and AEC 2800.
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Subject: Aerospace Studies	Number	Long Course Title	Min Units	Max Units	Long Description
AERO	1110	Air Force Organization	2.00	2.00	Fall. Organization of the United States Air Force. Focus on missions involving airlift forces, strategic forces, tactical forces as well as overseas forces. Development and employment of weapons systems and logistic support functions. Leadership laboratory activities.
AERO	1120	Air Force Organization	2.00	2.00	Spring. Organization of the United States Air Force. Focus on U.S. Defense policies, military balance between U.S. and eastern European forces as well as capabilities of Army, Navy and Reserve/Guard forces. Officership/professionalism and introduction to flight. Leadership laboratory activities.
AERO	2110	Air Force History	2.00	2.00	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	2.00	2.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	1.00	3.00	On demand. In-depth study of selected topics. Offered to individuals in lecture, seminar or independent study depending on student needs and nature of the material. May be repeated twice for up to six hours. Contact hours one to three hour/week. No special fees. Departmental permission required.

Subject: Aviation Studies	Number	Long Course Title	Min Units	Max Units	Long Description
AERT	99	Flight Evaluation	0.00	0.00	Student flight competency evaluation. Prerequisite: consent of instructor. May be repeated. Extra fee.
AERT	2150	Aviation Ground Operations	3.00	3.00	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	4.00	4.00	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	2.00	2.00	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	2.00	2.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	1.00	1.00	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	3.00	3.00	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	1.00	1.00	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	2.00	2.00	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	2.00	2.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	Principles and concepts involved in the development and implementation of airport emergency, environmental, and security plans in response to federal requirements and technological advancements. Prerequisites: Junior standing.
AERT	4040	Advanced Aerodynamics and Aircraft Performance	3.00	3.00	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	3.00	3.00	Spring. In-depth discussion of electrical, mechanical and hydraulic systems on aircraft, design and performance standards, capabilities and limitations, conformance to FAA specification. Prerequisites: AERT 3200 or prior consent.
AERT	4070	Multiengine Flight Instruction	1.00	1.00	Summer. Flight instruction in preparation for the FAA multiengine rating. Covers transition to multiengine aircraft and all normal, abnormal, and emergency operating procedures. Prerequisites: FAA Commercial Pilot-Airplane certificate with Instrument-Airplane rating, AERT 3060 or concurrent enrollment or prior consent. Extra fee.
AERT	4350	Airport Administration	3.00	3.00	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	2.00	2.00	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	3.00	3.00	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	1.00	1.00	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	1.00	1.00	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	3.00	3.00	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	3.00	3.00	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	Corporate Airline/Operations	3.00	3.00	Capstone course that integrates a student's knowledge and skill in study of operations and management of corporate or airline company. Focus on assessment and analyses of equipment, human resources, financial, economic and marketing requirements. Prerequisites: AERT 3540, MGMT 3050 and senior status.
AERT	4820	Flight Proficiency	1.00	3.00	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	1.00	3.00	For advanced students wanting to conduct intensive study of selected problems in aviation studies. May be repeated. Prerequisite: consent of college. Graded S/U.

Subject: Africana Studies	Number	Long Course Title	Min Units	Max Units	Long Description
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AFRS	2000	Introduction to Africana Studies	3.00	3.00	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	3.00	3.00	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	3.00	3.00	Fall, Spring. Students frame a cross-cultural topic, organize and conduct a research-based, senior-level project and present their findings orally. Completing and reviewing portfolios is the final self-assessment activity for majors.

Subject: Applied Health Science	Number	Long Course Title	Min Units	Max Units	Long Description
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AHS	4050	Case Studies in Health Care Administration	3.00	3.00	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.
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AHS	4100	Practicum	4.00	10.00	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.
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Subject: Allied Health Technology	Number	Long Course Title	Min Units	Max Units	Long Description
AHTH	95	Applied Basic Health Science	4.00	4.00	Developmental course in science skills and applied topics in physics, chemistry, and biology. Intended for students entering nursing or allied health programs. Offered only at Firelands College. Credit cannot be applied toward any degree program. Three hours of lecture/discussion and two hours lab. Graded A, B, C/No Credit. Students may not co-enroll in this course at the same time as any BIOL or CHEM course at 1000 level or above. Extra fee.
AHTH	1000	Nursing Aide Standards	2.00	2.00	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	3.00	3.00	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	1.00	1.00	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	2.00	2.00	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	1.00	1.00	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 Ed.
AHTH	1290	Essentials for Human Anatomy and Physiology	4.00	4.00	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	3.00	3.00	Fundamentals of microbiology; emphasis on morphology, growth, genetics, pathogenic microorganisms and their control. Extra fee.
AHTH	1310	Basic Anatomy and Physiology for Allied Health	5.00	5.00	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	3.00	3.00	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	3.00	3.00	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	1.00	1.00	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	2.00	2.00	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	2.00	2.00	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	4.00	4.00	Disordered human functions and systems; language, causes and types of diseases; diseases of the body systems, each described in terms of its etiology, pathology, symptoms and treatment. Four hours lecture. Prerequisite: AHTH 1310.
AHTH	2900	Special Topics in Allied Health	1.00	3.00	Special topics or current issues in allied health. Prerequisite: permission of instructor. May be repeated up to six credit hours maximum if topics vary.

Subject: Apparel Merchandising/Product Development					
	Number	Long Course Title	Min Units	Max Units	Long Description
AMPD	1510	Apparel and Textile Industry	3.00	3.00	Fall, Spring. Overview of industry including mills, manufacturers, designers, retailers and impact of technology in producing, distributing, and selling goods. Introduction to product development performed both at the retail and manufacturing levels. Preface to career preparation and internships. Prerequisite: GSW 1120.
AMPD	2020	Merchandising Math	3.00	3.00	Fall and Spring. Application course that focuses on the calculation and analysis of the selling price, profitability, assortment planning, purchasing, and inventory control. Includes spreadsheet applications and exercises. Prerequisite: MATH 1120 or MATH 1220 or higher.
AMPD	2510	Apparel Studio 1: Assembly and Fit	3.00	3.00	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	2810	Textiles for Apparel	3.00	3.00	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	F I T Visiting Student	12.00	18.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	Fall, Spring. Analysis of the fashion forecasting process; analysis of fashion dynamics of color, textile, and style trends; and examination of marketplace dynamics to identify and analyze the connection between consumer preferences and product. Prerequisites: AMPD 1510 and COOP 50. Extra fee.
AMPD	3890	Supervised Field Experience in Apparel Merchandising & Product Development	1.00	3.00	Summer. Full-time work experience within an apparel or soft goods retail organization. Work settings are approved on an individual basis. May be repeated. Graded S/U.
AMPD	4010	Twentieth Century Fashion	3.00	3.00	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. Prerequisites: AMPD 1510, AMPD major only with junior standing.

AMPD	4020	Merchandising Soft Goods	3.00	3.00	Fall, Spring. Merchandiser's role in planning, procuring, distributing, and promoting apparel products in a global market. Emphasis on retail mathematics for developing merchandise plans used to control profits and inventory. Introduction to technology used by merchandisers. Prerequisites: AMPD 1510, AMPD 2020, and MKT 3000. Contact Hours: 3.
AMPD	4030	Consumer Analysis in Fashion	3.00	3.00	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	3.00	3.00	Fall, Spring. Private label and product development processes. Develop a total concept for a line of garments, including fabrics, color palette style, and construction with emphasis on research, quality, and professional presentation, which meet acceptable standards. Prerequisites: AMPD 3130 and MKT 3000. Extra fee.
AMPD	4400	Computers for Apparel Products	3.00	3.00	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	3.00	3.00	Defines the scope and challenges of the apparel and textile industry in the global market. Examines theories, concepts, and problems relating to global trade of apparel and textile products. Prerequisites: AMPD 1510, AMPD 2810, ECON 2000 or higher, and junior standing.
AMPD	4890	Internship in Apparel Merchandising & Product Development	1.00	8.00	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	12.00	21.00	Fall, Spring, Summer. Visiting student studying at Fashion Institute of Technology in New York City. May be repeated. Prerequisite: acceptance to Fashion Institute of Technology. Graded S/U.

Subject: Arabic	Number	Long Course Title	Min Units	Max Units	Long Description
ARAB	1010	Beginning Arabic I	4.00	4.00	Introduction to modern standard Arabic. Four class periods and practice each week.
ARAB	1020	Beginning Arabic II	4.00	4.00	ARAB 1010 continued. Four class periods and practice each week. Prerequisite: ARAB 1010 or equivalent.
ARAB	2010	Intermediate Arabic I	4.00	4.00	ARAB 1010-1020 continued. Conversation, writing, reading, grammar. Four class periods and practice each week. Prerequisite: ARAB 1020 or equivalent.
ARAB	2020	Intermediate Arabic II	4.00	4.00	ARAB 2010 continued. Four class periods and practice each week. Prerequisite: ARAB 2010 or equivalent.
Subject: Architecture & Environmental Design	Number	Long Course Title	Min Units	Max Units	Long Description
ARCH	1050	Design Representation I	3.00	3.00	Fall, Spring, Summer. Fundamental freehand and machine-assisted drawing principles necessary to the investigation, visualization and presentation of design ideas. Drafting methods and techniques including the principles of orthographic projection, paraline and perspective drawing. One hour of lecture and four hours laboratory. Extra fee.
ARCH	2050	Design Representation II	3.00	3.00	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.
ARCH	2220	Design Studio I	3.00	3.00	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.
ARCH	2330	History of Architecture I	3.00	3.00	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	3.00	3.00	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	3.00	3.00	Fall, Spring, Summer. Mechanical and electrical building systems including review of scientific principles used in system design. Topics include equipment description and selection, system types, system components and basic design. Prerequisite: ARCH 1050.
ARCH	2710	Computer-Aided Design for Architecture	3.00	3.00	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. Prerequisite: ARCH 1050, ENGT 1100, or 2 years (2 units) high school CAD with grade B or better.
ARCH	3210	Design Studio 2	6.00	6.00	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	6.00	6.00	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	3.00	3.00	Spring. Lecture and panel discussion sessions on topics in architectural design theory. Prerequisite: ARCH 2220 (formerly ARCH 250), junior standing or permission of instructor.
ARCH	3360	Architectural Materials and Systems	3.00	3.00	Fall. Building systems approach to understanding architectural elements of buildings. Topics include fire protection, thermal and moisture protection, coatings, doors and windows, curtain walls, ceiling systems. Two hours lecture and two hours laboratory. Prerequisites: ARCH 2360 and junior standing. Extra fee.

ARCH	3370	Mechanical and Electrical Building Systems II	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	6.00	6.00	Fall. Fourth course in architectural design sequence focuses on the study of urbanism and the creation of site-specific architecture. Students study cities in the USA and abroad and then apply architectural concepts to design in urban environments. Prerequisite: C or better in ARCH 3220. Extra fee.
ARCH	4220	Design Studio 5	6.00	6.00	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	4800	Topics in Architecture and Design	1.00	3.00	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.

ARCH	4900	Problems in Architecture/Environmental Design Studies	1.00	3.00	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.
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Subject: Art	Number	Long Course Title	Min Units	Max Units	Long Description
ART	1010	Introduction to Art	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	Fall, Spring. Creative explorations of sculptural and time-based art. Principles of construction and design of works extended in space and time. The course is composed of two workshops: 3D Design--organization of space and form, exposure to various construction methods, tools and materials; and 4D Design--introduction to chronological design concerns, kinetics, installation, audience, actions and documentation. Required of art majors and minors. Can be taken with ART 1020 or ART 1030. Extra fee.

ART	4700	Independent Study	1.00	3.00	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	1.00	3.00	Designed for students seeking to gain field experience under the guidance of a professional arts administrator, educator, or gallerist. Will provide students with practical information and skills related to a variety of careers in arts management. Repeatable to nine hours; limited to six hours with same institution/agency. Graded S/U.

Subject: Digital Art	Number	Long Course Title	Min Units	Max Units	Long Description
ARTC	2210	Digital Imaging	3.00	3.00	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: Two of the following with concurrent registration in the third: ART 1020, ART 1030, ART 1120, or consent of instructor. Extra fee.
ARTC	3000	Special Topics in Digital Arts	3.00	3.00	On demand. Various introductory 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 a total of six hours under different topics.
ARTC	3110	3-D Modeling	3.00	3.00	Fall, Spring. Concepts and techniques of 3-D computer modeling and rendering. Course includes geometric modeling, surface properties, texturing, lighting, and rendering techniques. Focus on creative idea development using 3-D virtual space. Five studio hours. Prerequisites: ARTC 2210, ART 1020, ART 1030, ART 1120 or consent of instructor. Extra fee.
ARTC	3120	3-D Digital Animation	3.00	3.00	Fall, Spring. Concepts and techniques of 3-D digital animation. Course includes keyframing, particle systems, dynamic simulation, and basic kinematic techniques as well as principles of traditional animation and concepts development. Five studio hours. Prerequisite: ARTC 3110 or consent of instructor. Extra fee.

ARTC	3310	Interactive Art	3.00	3.00	Fall, Spring. Basic concepts of digital interactive multimedia art. Emphasis on interactive nonlinear structures and interface design. Creative idea development which integrates image, text, animation, and audio with programming. Five studio hours. Prerequisites: ARTC 2210, CS 2010 or consent of instructor. Extra fee.
ARTC	3440	Digital Video Art	3.00	3.00	On demand. Creative production of time-based art using digital video and effects. Emphasis on video concepts, techniques, composition, sequencing of ideas, and narrative as well as non-narrative structures. Introduction to the history of video art as an art form and experimental approaches to video art and performance. Five studio hours. Prerequisite: ARTC 2210 or consent of instructor.
ARTC	4000	Special Topics in Digital Arts	1.00	3.00	Fall, Spring, Summer. Various topics chosen to meet digital arts curriculum needs. Topics will address issues related to studio techniques or historical and contemporary theory. Five studio hours. Prerequisites will be announced for each offering. May be repeated to twelve hours. Extra fee.
ARTC	4090	Professional Practices and Presentation in Digital Arts	3.00	3.00	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: senior standing, BFA Digital Arts major. Concurrent registration in ARTC 4180. Extra fee.
ARTC	4130	Digital Character Animation I	3.00	3.00	Fall. The course is the first of a two-course sequence. 3D animation pre-production including narrative language and storytelling, scriptwriting, storyboarding, character design, animatics, and advanced character modeling for animation. Five studio hours. May be repeated to six hours. Prerequisites: ARTC 3120 or consent of instructor. Extra fee.
ARTC	4140	Digital Character Animation II	3.00	3.00	Spring. The course is the second of a two-course sequence. Digital character animation production and post-production including advanced animation techniques, inverse and forward kinematics, facial animation, binding techniques, video referencing, rotoscoping, cinematography, lighting, compositing, and editing for the final production. Five studio hours. Prerequisites: ARTC 4130 or consent of instructor. May be repeated to six hours. Extra fee.

ARTC	4180	Senior Studio in Digital Arts	3.00	3.00	Fall, Spring. 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: Senior standing; BFA Digital Arts major. Concurrent registration in ARTC 4090. May be repeated to six hours. Extra fee.
ARTC	4230	Advanced Digital Imaging Art Studio	3.00	3.00	Spring and/or Fall. Advanced artistic development using imaging techniques such as digital paint, image manipulation, and digital video. Investigation of artistic image output and representation through print, installation, or time based work. May be repeated to six hours. Five studio hours. Prerequisite: ARTC 3210 or consent of instructor. Extra fee.
ARTC	4240	Alternative Digital Print	3.00	3.00	Investigation of a variety of non-standard ways to realize artworks that start with digital images. This includes various handmade printing substrates, printing and transfer methods, pre-print alterations, and post print additions. Six studio hours. Prerequisite: ARTC 3210 or consent of instructor. May be repeated to six hours.
ARTC	4250	Photography for Digital Artists	3.00	3.00	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: ARTC 2210 or consent of instructor.
ARTC	4330	Advanced Interactive Art Studio	3.00	3.00	Spring and/or Fall. Creative production of advanced digital interactive multimedia art. Exploration of emerging technologies as well as a more in-depth study of programming and designing artistic interactive experiences. May be repeated to six hours. Five studio hours. Prerequisite: ARTC 3310 or consent of instructor. Extra fee.
ARTC	4410	Collaborative Multimedia Development	3.00	3.00	Spring. Focus on teamwork and creative application of multimedia and digital animation techniques to solve real-world problems. Five studio hours. Prerequisites: ARTC 2010, ARTC 3210, or consent of instructor. May be repeated to six hours.

ARTC	4420	Art and Virtual Environments	3.00	3.00	On Demand. Independent and group work addressing the theories, technologies, expectations, and applications of Virtual Environments and 3D Gaming. Students will work with hardware and software configurations to build interactive 3D environments. Five studio hours. Prerequisites: ARTC 3120, ARTC 3310 or consent of instructor. May be repeated to six hours. Extra fee.
ARTC	4430	Artistic Animation Effects	3.00	3.00	On Demand. Creative development of animation and special effects using non-geometric modeling such as particle systems and dynamics. Focus on artistic, technical and conceptual aspects of advanced animation techniques and compositing. Five studio hours. Prerequisite: ARTC 3120 or consent of instructor. May be repeated to six hours. Extra fee.
ARTC	4440	Advanced Digital Video Art	3.00	3.00	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: ARTC 3440 or consent of instructor. May be repeated to six hours. Extra fee.
ARTC	4700	Independent Study in Digital Arts	1.00	3.00	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	Computer Art Practicum	3.00	3.00	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	1.00	3.00	On Demand. Various topics chosen to meet digital arts curriculum needs. Topics will address issues related to studio techniques or historical and contemporary theory. Five studio hours. Prerequisites will be announced for each offering. May be repeated to twelve hours if the content is different.

Subject: Art Design	Number	Long Course Title	Min Units	Max Units	Long Description
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ARTD	2010	Principles of Graphic Design	3.00	3.00	Fall, Spring. Introduction to, and exploration and application of: design elements and principles, tools, techniques, and terminology of the discipline. Introduction to design history, visual communications theory and critical thinking. Development of oral, visual, and cognitive communication/presentation and conceptualization skills. Five studio hours. Prerequisites: ART 1020, ART 1030, and ART 1120. VCT majors: VCT 1030 and VCT 1040. Extra fee.
ARTD	2020	Principles of Typography	3.00	3.00	Fall, Spring. Introduction to, and exploration and application of: typographic history, principles, tools, techniques, and terminology. Discussion of visual communication theory and critical thinking. Continued development of oral, visual, and cognitive communication/presentation and conceptualization skills. Five studio hours. Prerequisite: ARTD 2010. Extra fee.
ARTD	3010	Intermediate Graphic Design	3.00	3.00	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: successful completion of School of Art BFA Portfolio Review, Graphic Design Portfolio Review, ARTD 2020; VCT: successful completion of Graphic Design Portfolio Review and ARTD 2020. Extra fee.
ARTD	3030	History of Graphic Design	3.00	3.00	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	3.00	3.00	Fall only. Advanced exploration in graphic design principles and techniques with a strong emphasis on three-dimensional design issues. Includes development of packaging, direct mail campaigns, and environmental graphics. Five studio hours. Prerequisites: successful completion of School of Art BFA Portfolio Review, Graphic Design Portfolio Review, and ARTD 2020. Extra fee.

ARTD	3050	Graphic Design Processes & Procedures	3.00	3.00	Spring only. Comprehensive technical lecture and lab course covering, but not limited to, the processes and procedures of print and paper specification, and electronic pre-press production, as well as an in-depth exploration of the software and hardware utilized. Introduction to proper design studio management practices and third-party support vendor operations and interaction (printers, photographers, et al.). Material presented through a series of lectures, demos, written tests and field trips. Five lecture/lab hours. Prerequisites: ARTD 3010 and ARTD 3040. Extra fee.
ARTD	3060	Graphic Design Theory	3.00	3.00	Spring only. Advanced exploration of the interrelationship between communication theory and application. Emphasis on developing awareness of a range of theoretical approaches leading to solutions for complex communication problems. Five studio hours. Prerequisites: ARTD 3010 and ARTD 3040. Extra fee.
ARTD	4030	Identity Design	3.00	3.00	Fall only. Introduction to, and exploration and application of identity design and graphic/marketing programs, with a practical emphasis on conceptual and strategic thinking and writing within the context of brand awareness. Output to include the development of a comprehensive system of interrelated applications based on intuitive and investigative research of an organization and its intended audience(s). Continued development of oral, visual, and cognitive communication/presentation skills. Five studio hours. Prerequisites: ARTD 3050 and ARTD 3060. Extra fee.
ARTD	4050	Interactive Graphic Design	3.00	3.00	Fall only. Continued exploration and application of design principles and techniques, with specific focus on the digital realm. Specific introduction to, exploration and application of: information architecture theory, user interface design principles, pixel-based typography, and experimental, sequential and interactive modes of communication. Five studio hours. Prerequisites: ARTD 3050 and ARTD 3060. Extra fee.

ARTD	4060	Graphic Design Practicum	3.00	3.00	Introduction to, and hands-on field experience in, the fundamentals of studio-based business operations. Work in fully operational Division-run graphic design studio, within a dynamic group structure. Practical application of all skills and knowledge. Supplemented by field trips, guest lecturers, reading, research, and ongoing project responsibilities. May be repeated to 6 credit hours. Maximum of 6 credit hours may be applied to Studio Art Support. Prerequisites: Competitive portfolio review, plus ARTD 3050 and ARTD 3060. Extra fee.
ARTD	4080	Senior Studio in Graphic Design	3.00	3.00	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	1.00	3.00	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	3.00	6.00	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	1.00	3.00	On demand. Innovative and intensive group studies in selected design research. Prerequisites announced for each offering. May be repeated.

Subject: Art Education	Number	Long Course Title	Min Units	Max Units	Long Description
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ARTE	2440	Art for Early Childhood Education	2.00	2.00	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	2.00	2.00	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	3.00	3.00	Fall, Spring. Introduction to historical/contemporary approaches to art education, study of child art development, and lesson planning. Includes field experience in schools. Prerequisites: Sophomore standing; PSYC 1010; a grade of "C" or better in GSW 1120. C/F hours: 40. Extra fee.
ARTE	3420	Digital Technology in Art Education	3.00	3.00	Fall, Spring. Digital imaging, multimedia equipment, and use of the Internet to create computer-generated art and instructional aids for K-12 art curriculum. Programs include Photoshop, InDesign, Illustrator, I-movie, Dreamweaver, and Powerpoint. Blogging and other networking tools are also stressed. Prerequisite: ARTE 2520. Extra fee.
ARTE	3520	Media and Methods in Art Education	3.00	3.00	Fall, Spring. Studio practices, art criticism, and art history methods; curriculum development and lesson planning; preschool field-based practicum. Prerequisites: ARTE 2520, junior standing. May be taken concurrently with ARTE 3820. C/F hours: 40. Extra fee.
ARTE	3820	Art Methods for Special Needs Learners	3.00	3.00	Fall, Spring. Art teaching methods for exceptional populations in regular and alternative settings. Field-based practicum. May be taken concurrently with ARTE 3520. C/F hours: 40. Extra fee.
ARTE	4070	Visual Arts Methods and Teaching Practicum	3.00	3.00	Fall, Spring. Implementation of planned curricula, teaching methods, and assessment strategies in School of Art's Saturday Art Program (ages 3-17). Prerequisites: ARTE 3420, ARTE 3520, ARTE 3820. May be taken concurrently with ARTE 4520. C/F hours: 70. Extra fee.

ARTE	4520	Advanced Methods in Art Education	3.00	3.00	Fall, Spring. Curriculum development in art criticism, art history, and aesthetics, assessment, classroom management, and curriculum issues for middle childhood through young adult. Prerequisites: ARTE 3420, ARTE 3520, ARTE 3820. May be taken concurrently with ARTE 4070. C/F hours: 20. Extra fee.
ARTE	4700	Independent Studies in Art Education	1.00	3.00	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	7.00	7.00	Fall, Spring. Classroom teaching under supervision on full-day basis at early childhood/middle childhood levels, including conferences and seminars. Required for State multi-age licensure in visual arts. Eligibility requirements must be met. C/F hrs.: 35 hours per week. Graded S/U. Extra fee.
ARTE	4950	Special Topics in Art Education	1.00	3.00	Workshop topics and intensive group studies relative to special needs of visual arts teachers. May be repeated.
ARTE	4970	Teaching Internship	7.00	7.00	Fall, Spring. Classroom teaching under supervision on full-day basis at middle childhood/adolescent through young adult levels, including conferences and seminars. Required for State multi-age licensure in visual arts. Eligibility requirements must be met. C/F hrs.: 35 hours per week. Graded S/U. Extra fee.

Subject: Art History	Number	Long Course Title	Min Units	Max Units	Long Description
ARTH	1450	Western Art I	3.00	3.00	Fall, Spring. Ancient and Medieval art. Applicable to the BG Perspective (general education) humanities and arts requirement.
ARTH	1460	Western Art II	3.00	3.00	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	2700	Survey of World Art	3.00	3.00	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	3.00	3.00	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.

ARTH	3110	Bronze Age Aegean Art	3.00	3.00	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.
ARTH	3130	Greek Art	3.00	3.00	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.
ARTH	3150	Art of Etruria and Rome	3.00	3.00	Etruscan and Roman sculpture, architecture and painting from the 8th century B.C. to the 5th century A.C. Prerequisite: one of ARTH 1450, ARTH 1460, or ARTH 2700.
ARTH	3310	Early Christian and Byzantine Art	3.00	3.00	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.
ARTH	3330	Medieval Art	3.00	3.00	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.

ARTH	3350	Art of the Italian Renaissance	3.00	3.00	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.
ARTH	3370	Northern Renaissance Art	3.00	3.00	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.
ARTH	3390	Baroque Art	3.00	3.00	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.
ARTH	3610	Art of the 19th Century	3.00	3.00	Painting and sculpture in the 19th century in Europe from neoclassicism through post-impressionism. Prerequisite: one of ARTH 1450, ARTH 1460, or ARTH 2700.
ARTH	3630	Modern Architecture	3.00	3.00	Architecture of 19th and 20th centuries in Europe and America. Prerequisite: one of ARTH 1450, ARTH 1460, or ARTH 2700. Extra fee.

ARTH	3650	Histories of Photography: Theory and Criticism from Invention to Present	3.00	3.00	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. Extra fee.
ARTH	3670	Art of the Modern Period	3.00	3.00	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. Extra fee.
ARTH	3690	Art of the Contemporary Period	3.00	3.00	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.
ARTH	3710	Art of India and S.E. Asia	3.00	3.00	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. Applicable to the BG Perspective (general education) humanities and arts and international perspective requirements. Extra fee.
ARTH	3730	Art of China and Japan	3.00	3.00	Art and architecture of China and Japan from earliest cultures to present. Prerequisite: one of ARTH 1450, ARTH 1460, or ARTH 2700. Applicable to the BG Perspective (general education) humanities and arts and international perspective requirements.
ARTH	3750	Art of Western Africa	3.00	3.00	Western African art within its cultural, historical, social, and spiritual context. Discussion of a representative range of peoples from a variety of cultures, time periods, and geographic locations. Gives student a better understanding and appreciation of this complex art. Prerequisite: one of ARTH 1450, ARTH 1460, or ARTH 2700. Applicable to the BG Perspective (general education) humanities and arts and international perspective requirements. Extra fee.

ARTH	3770	MesoAmerican Art	3.00	3.00	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. Applicable to the BG Perspective (general education) humanities and arts and international perspective requirements.
ARTH	3790	Oceanic Art	3.00	3.00	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. Applicable to the BG Perspective (general education) humanities and arts and international perspective requirements.
ARTH	4350	Critical Issues in Early Modern Art	3.00	3.00	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.
ARTH	4650	Critical Issues in Art and Technologies	3.00	3.00	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. Repeatable once when topics vary.

ARTH	4690	Critical Issues in Modern and Contemporary Art	3.00	3.00	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 3600-level course (3600-3699). Repeatable once.
ARTH	4700	Independent Studies in Art History	1.00	3.00	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	3.00	3.00	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.
ARTH	4800	Travel Colloquium	3.00	3.00	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.
ARTH	4900	Professional Practices in Art History	3.00	3.00	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.
ARTH	4950	Special Topics in Art History	1.00	3.00	Innovative and intensive group studies in selected art historical research. Prerequisites announced for each offering. May be repeated. Prerequisite: junior or senior standing or consent of instructor.

Subject: Art Studio	Number	Long Course Title	Min Units	Max Units	Long Description
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ARTS	2110	Drawing: The Figure	3.00	3.00	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	3.00	3.00	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	3.00	3.00	Fall, Spring. Introduction to the theory, practice and history of printmaking. Concentration on basic relief, intaglio, and monoprinting methods. Five studio hours. Prerequisites: ART 1020 and ART 1030. Extra fee.
ARTS	2410	Introduction to Photography	3.00	3.00	Fall, Spring. Introduction to the theory, practice and history of black and white photography. Work with 35mm camera is combined with slide lectures and principles of optics, film, cameras, and darkroom techniques. Five studio hours. Prerequisite: ART 1020. Extra fee.
ARTS	2610	Glass I	3.00	3.00	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. Extra fee.
ARTS	2710	Ceramics I	3.00	3.00	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	3.00	3.00	Fall, Spring. Foundation techniques and creative processes including design, fabrication, casting, and surface treatments. Five studio hours. Prerequisites: ART 1020 or ART 1030 or consent of instructor. Extra fee.
ARTS	2910	Modeling and Moldmaking	3.00	3.00	Fall, Spring. Students will accurately render objects in clay, create an abstraction, and be introduced to plaster molds, castings, and simple armature construction. Five studio hours. Prerequisite: ART 1120. Extra fee.

ARTS	3000	Special Topics 2-D	1.00	3.00	On demand. Innovative and intensive group study in selected studio research. Topic will vary with each offering. May be repeated. Prerequisite: BFA standing.
ARTS	3010	Special Topics 3-D	1.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	Alternate semesters. Introduction to the theory, practice, and history of lithography. Techniques include: wet and dry media on stone and plate, and photo processes. Five studio hours. Prerequisite: ARTS 2310. Extra fee.
ARTS	3420	Photography: Large Format	3.00	3.00	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	Photography: Color	3.00	3.00	Fall, Spring. Introduction to the theory, practice and history of color photography. Concentration on printing color negatives as well as the basics of color negative processing. Exploration of the use of color as a means of personal expression. Five studio hours. Prerequisite: ARTS 2410. Extra fee.
ARTS	3440	Digital for Photographers	3.00	3.00	Fall, Spring. This course will familiarize students with the basic digital tools of scanning (input), manipulation (Photoshop), and printing (output) required to make digital photographic prints. Students will learn how these tools might be used in their ongoing development of a personal vision through self-directed and assigned projects. Students will gain technical understanding of topics such as color calibration and device profiling, file types and file management, and advanced color correction terms and techniques. Five studio hours. Prerequisites: ARTS 2410 and ARTS 3430. Extra fee.
ARTS	3620	Glass II	3.00	3.00	Fall, Spring. Intermediate-level techniques of freehand blown glass formation. Introduction to glass composition and studio equipment technology. Studio equipment construction. Five studio hours. Prerequisite: ARTS 2610. Repeatable to six hours. Extra fee.
ARTS	3650	Stained Glass I	3.00	3.00	Fall, Spring. Creative use of glass in two- and three-dimensional compositions using the traditional hand cut glass and copper foil techniques. Five studio hours. Prerequisite: ART 1020. Extra fee.
ARTS	3720	Ceramics II	3.00	3.00	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	3.00	3.00	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	3.00	3.00	Fall, Spring. Creative applications of basic enameling techniques are explored for various applications on jewelry and related objects. Five studio hours. Prerequisite: ARTS 2810. Extra fee.

ARTS	3830	Jewelry and Metals II	3.00	3.00	Fall, Spring. Creative and aesthetic applications of casting processes using silver, gold, and bronze in jewelry and related objects. Five studio hours. Prerequisite: ARTS 2810. Extra fee.
ARTS	3920	Introduction to Carving	3.00	3.00	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	3.00	3.00	Fall, Spring. Introduction to metal casting in bronze, aluminum, and possibly iron, using the lost wax, ceramic shell, and bonded sand techniques. Five studio hours. Prerequisite: ARTS 2910. Repeatable to six hours. Extra fee.
ARTS	4000	Special Topics 2-D	1.00	3.00	On demand. Innovative and intensive group study in selected studio research. Topic will vary with each offering. May be repeated. Prerequisite: BFA Art standing. Extra fee.
ARTS	4010	Special Topics 3-D	3.00	3.00	On demand. Innovative and intensive group study in selected studio research. Topic will vary with each offering. May be repeated. Prerequisite: BFA Art standing. Extra fee.
ARTS	4070	Art in Context	3.00	3.00	Spring only. Capstone course intended for students in BA Art degree. Also open to BFA Art students. Portfolio preparation together with a variety of research activities leading to understanding of studio art as a singular activity located within broader cultural contexts. Five studio hours.
ARTS	4090	Professional Practices and Presentation	1.00	1.00	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	4240	Advanced Painting and Drawing	3.00	3.00	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 or ARTS 3130 or by permission of the instructor. Repeatable to six hours. Extra fee.
ARTS	4280	Senior Studio in Painting and Drawing	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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 Photography	3.00	3.00	Fall, Spring. Will allow advanced students to focus on ideas in either black and white or color. Emphasis will be placed on individual research, the refinement of technical skills and the development of imagery. Five studio hours. Prerequisites: ARTS 3420 and ARTS 3430 or by permission of the instructor. Repeatable to six hours. Extra fee.
ARTS	4480	Senior Studio in Photography	3.00	3.00	Fall, Spring. For 2-D majors with a specialization in photography only. Supervised individual research as it applies to the final exhibition of photographic prints for the BFA Art degree. Five studio hours. Prerequisite: ARTS 4440. Repeatable to six hours. Extra fee.
ARTS	4630	Glass III	3.00	3.00	Fall, Spring. Advanced-level blown glass formation and cold glassworking techniques. Introduction to mold formed and cast glass processes. An emphasis is placed on interdisciplinary creative work. Studio equipment construction. Five studio hours. Prerequisite: ARTS 3620. Repeatable to six hours. Extra fee.

ARTS	4640	Glass IV	3.00	3.00	Fall, Spring. Creative use of multiple glass working processes developing an aesthetic direction. Focus on personal glass studio development and related technology. Five studio hours. Prerequisite: ARTS 4630. Extra fee.
ARTS	4680	Senior Studio in Glass	3.00	3.00	Fall, Spring. For 3-D major with a specialization in glass only. Supervised individual research as it applies to the final exhibition of glass works for the BFA Art degree. Five studio hours. Prerequisite: ARTS 4640. Repeatable to six hours. Extra fee.
ARTS	4740	Advanced Ceramics	3.00	3.00	Fall, Spring. Intended for students planning a career in the ceramics field. Sophisticated techniques of clay, glaze and firing methods. Emphasis on creation of a complex, well researched, aesthetically concise and technically successful body of work. Five studio hours. May be repeated to six hours. Prerequisite: ARTS 3730. Extra fee.
ARTS	4750	Glazes and Raw Materials	3.00	3.00	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	3.00	3.00	On demand. This course qualifies students to design, construct, and repair ceramic kilns. Emphasis is on real-world problem-solving strategies related to common kiln types. Students are expected to demonstrate both theoretical and practical knowledge of the concepts of kiln design and construction. Student will complete projects in kiln design, construction repair, and firing. Prerequisite: ARTS 2710 or permission of instructor. Extra fee.
ARTS	4780	Senior Studio in Ceramics	3.00	3.00	Fall, Spring. For 3D majors with a specialization in ceramics only. Supervised individual research as it applies to the final exhibition of ceramic works for the BFA Art degree. Five studio hours. Prerequisite: ARTS 4740. Repeatable to six hours. Extra fee.
ARTS	4800	Travel Studio	3.00	3.00	On demand. Studio practice in conjunction with travel to selected domestic or international destinations. Use of a visual media to enhance experience and understanding of the arts in relation to culture and history.

ARTS	4840	Jewelry and Metals III	3.00	3.00	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	3.00	3.00	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	3.00	3.00	Fall, Spring. For 3-D majors with a specialization in jewelry and metals only. Supervised individual research as it applies to the final exhibition of jewelry/metals works for the BFA Art degree. Five studio hours. Prerequisite: ARTS 4850. Repeatable to six hours. Extra fee.
ARTS	4890	Studio Internship	1.00	3.00	Designed for students seeking to gain field experience under the guidance of a professional artist. Repeatable to six hours.
ARTS	4940	Advanced Technical Carving	3.00	3.00	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	3.00	3.00	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	3.00	3.00	Fall, Spring. For 3-D major with a specialization in sculpture only. Supervised individual research as it applies to the final exhibition of sculptural works for the BFA Art degree. Five studio hours. Prerequisite: ARTS 4950. Extra fee.

Subject: Arts & Sciences	Number	Long Course Title	Min Units	Max Units	Long Description
AS	1000	Seminar in Arts and Sciences	1.00	4.00	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	1.00	4.00	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	1.00	1.00	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	1.00	1.00	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	1.00	1.00	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.
AS	1100	Arts BG	3.00	3.00	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	3.00	3.00	Summer. Hands-on, inquiry-based activities involving fundamental ideas in mathematics and science. Ideas revolve around problem solving. Open only to ACTION students.

AS	1160	Research in Math and Science	1.00	1.00	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	2000	Seminar in Arts and Sciences	1.00	5.00	On demand. Interdisciplinary studies in arts and sciences or area of study meeting new trends in arts and sciences. May be repeated by consent of dean of the College of Arts and Sciences. Prerequisite: consent of instructor.
AS	2500	Great Ideas	3.00	3.00	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	1.00	5.00	On demand. Interdisciplinary studies in arts and sciences or area of study meeting new trends in arts and sciences. May be repeated by consent of dean of the College of Arts and Sciences. Prerequisite: consent of instructor.
AS	3950	Workshop on Current Topics in Arts and Sciences	1.00	4.00	On demand. Workshop on current topics and issues within arts and sciences. May be repeated if topics differ, upon approval of program adviser.
AS	4000	Seminar in Arts and Sciences	1.00	4.00	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	1.00	15.00	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	1.00	4.00	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	1.00	12.00	On demand. Applied experience for students in arts and sciences programs. Specific proposal and permission of undergraduate adviser as well as College of Arts and Sciences required prior to enrollment. Maximum internship credit is 12 hours. Guidelines available in College of Arts and Sciences office. Graded S/U.
Subject: Asian Studies	Number	Long Course Title	Min Units	Max Units	Long Description
ASIA	1800	Asian Civilizations	3.00	3.00	Fall, Spring. This is a core course for all Asian Studies majors and minors. Provides general knowledge of Asia relative to historical, cultural, social, economic, and political developments of selected countries in East, South, or Southeast Asia. Credit allowed for only one of ASIA 1800, HIST 1800. Applicable to the BG Perspective (general education) social sciences and international perspective requirements.
ASIA	3000	Peace and Cultural Legacies in the Nuclear Age	3.00	3.00	Spring. This is an interdisciplinary course on peace and cultural legacies in the nuclear age, with emphasis on how Asians and Americans have lived under the threat of nuclear war. It will examine the impact of nuclear bombings, their threats on peace, and the cultural history of the nuclear arms race and peace movements in the context of Asian and American philosophy, science, politics, art, literature, and education.
ASIA	3100	Hiroshima and Beyond	3.00	3.00	Summer. This course will undertake an intensive field study in Hiroshima, Japan on the human and material consequences of the atomic bombings and the subsequent history of nuclear politics and culture. The students will witness the aftermath of a nuclear attack in a historical context and study the means of achieving world peace. No prerequisites, but students who have taken ASIA 3000 will be given priority to enrollment. Students must assume the expense of round trip airfare to Japan.
ASIA	4800	Senior Project in Asian Studies	3.00	3.00	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	3.00	12.00	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.
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Subject: Astronomy	Number	Long Course Title	Min Units	Max Units	Long Description
ASTR	2010	Modern Astronomy	3.00	3.00	Fall, Spring, Summer. Introduction to the physical universe, including most or all of: motions in the sky, gravity, radiation, the Sun, the nature and evolution of stars, neutron stars and black holes, the Milky Way galaxy, galaxies, active galactic nuclei, the structure and evolution of the universe, and the search for extraterrestrial life. Some observational work. Applicable to the BG Perspective (general education) natural sciences requirement. Extra fee.
ASTR	2120	The Solar System	3.00	3.00	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	1.00	3.00	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	3.00	3.00	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	3.00	3.00	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	2.00	2.00	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	2.00	2.00	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	3.00	3.00	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	1.00	3.00	On demand. Introduction to research in astronomy; projects chosen in consultation with adviser, may include library and laboratory work. Prerequisite: consent of instructor. May be repeated.

Subject: Athletic Training	Number	Long Course Title	Min Units	Max Units	Long Description
AT	2020	Introduction to Athletic Training	3.00	3.00	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	2.00	2.00	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.
AT	2100	Care and Prevention of Sports Injuries	3.00	3.00	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	1.00	1.00	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	3.00	3.00	Examination of the application and physiological responses to selected therapeutic modalities.
AT	3140	Clinical Education in Athletic Training 2	1.00	1.00	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	3.00	3.00	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	2.00	2.00	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	4100	Pathology & Evaluation of Orthopedic Injuries: Lower Extremity	3.00	3.00	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 lower extremity athletic injuries. Prerequisite: AT 3120. Extra fee.
AT	4120	Clinical Education in Athletic Training 4	2.00	2.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	2.00	2.00	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.

Subject: Business Administration	Number	Long Course Title	Min Units	Max Units	Long Description
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BA	1010	Special Topics in Business Administration	1.00	3.00	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	3.00	3.00	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	1100	Applied Business Experience I	1.00	1.00	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 to any major. Pre- or corequisite: BA 1500.
BA	1500	Overview of Business Administration	3.00	3.00	Introduction to functional areas and environments of business administration. Knowledge and skill development in accounting, finance, management and marketing. Overview of legal, economic, ethical and social/cultural aspects of business in domestic and global markets. Freshmen only; to be taken for letter grade; credit not allowed for both BA 1500 and BA 1020.
BA	2010	Special Topics in Business Administration	1.00	3.00	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	3.00	3.00	Fall, Spring, Summer. Principles of effective communication in writing business messages such as letters, memos, e-mail, and reports. Primary emphasis on written communication skills for use in business and public organizations with attention given to oral communication skills in business, such as small group and one-on-one communication. Prerequisite: GSW 1120. Extra fee.

BA	2040	Introduction to Entrepreneurship	3.00	3.00	Introduction to entrepreneurship and its importance to the economy. Study of the entrepreneurial process from conception to birth of a new venture. Concentration on attributes of successful entrepreneurs including opportunity recognition, innovation, venture screening, risk assessment, risk tolerance, identification of resources, and business planning to learn how to turn opportunities into a viable business.
BA	2200	Applied Business Experience II	1.00	1.00	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: BA 1000; sophomore standing.
BA	3000	Executive Seminar	2.00	2.00	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	1.00	3.00	Selected topics in business administration not covered in depth by existing courses. Offered in lecture or seminar format as a function of student demand or course content. Prerequisites if any depend upon course content. May be restricted to juniors and/or seniors. Repeatable if topics differ.
BA	3040	Innovation and Creative Thinking	3.00	3.00	Recognizing and creating opportunities, innovation, and passion in pursuit of entrepreneurial ventures. Topics include challenges of fostering creativity, creative problem solving, taking risk, and organizing and managing innovation. Prerequisite: BA 2040.
BA	3050	Ethics and Entrepreneurship	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3300	Applied Business Experience III	1.00	1.00	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. Prerequisites: BA 2200, junior standing.
BA	3900	Business in the Global Arena	3.00	3.00	Fall, Spring, Summer. Provide students with an understanding of the changing global business environment and its effects on managers, fostering the development of skills needed to assess opportunities and solve business problems in the global arena. Prerequisites: ECON 2000, or ECON 2020 and ECON 2030.
BA	3950	Workshop on Current Topics in Business Administration	1.00	3.00	On demand. Selected topics in business administration. May be repeated if topics differ.
BA	3960	Workshop on Current Topics in Business Administration	1.00	3.00	On demand. Selected topics in business administration. May be repeated if topics differ. No credit allowed toward BSBA degree.
BA	4000	Senior Applied Business Experience	3.00	3.00	Fall, Spring, Summer. 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 3010, OR 3800; and admission to the BSBA.
BA	4010	Special Topics in Business Administration	1.00	3.00	Selected topics in business administration not covered in depth by existing courses. Offered in lecture or seminar format as a function of student demand or course content. Prerequisites if any depend upon course content. May be restricted to juniors and/or seniors. Repeatable if topics differ.
BA	4040	New Venture Creation	3.00	3.00	Business venture planning, initiation, and management. Mechanics of starting a business, including opportunity and industry analysis, and entry strategies. Preparation of a business plan. Identification of alternative business models. The course emphasizes entrepreneurship as a planned growth process. Prerequisites: C or better in each of BA 2040, FIN 3040, and MKT 3000 or MKT 3010.

BA	4050	Business Policy and Strategy	3.00	3.00	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 3000 or MKT 3010 and OR 3800 and admission to the BSBA program. (May not be taken concurrently with any of the prerequisites.)
BA	4060	Global Strategy	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	Focuses on advanced topics in global management from the firm perspective. Concepts studied include: environmental influences; social responsibility and ethics; cross-cultural negotiation and decision-making; global alliances and strategy implementation; building, motivating and leading global teams, and managing a global workforce. Prerequisites: MGMT 3600 or MGMT 3050 and C or better in BA 3900.
BA	4800	Hospitality Management Seminar	3.00	3.00	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	1.00	3.00	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	1.00	3.00	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	1.00	3.00	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	1.00	3.00	Fall, Spring, Summer. Supervised, independent program of reading and study. Prerequisites: 3.0 accumulative GPA and consent of department.

Subject: Business Administration Technology	Number	Long Course Title	Min Units	Max Units	Long Description
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BAT	1000	Introduction to Real Estate	2.00	2.00	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	2.00	2.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	Introduction of organization, management and practice of marketing by business firms.
BAT	2050	Total Quality Leadership	3.00	3.00	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	3.00	3.00	Funds allocation and acquisition process of the firm, financial planning, capital budgeting, capital structure, long- and short-term financing.
BAT	2080	Advertising	3.00	3.00	Design, layout, production and placement of advertising, historical and cultural precedents of modern advertising.

BAT	2090	Management and Supervision	3.00	3.00	Principles of supervision and management techniques. Planning supervisory activities, motivating employees, delegation, leadership behavior, time management, managing performance, performance appraisal and management relations. Three hours lecture.
BAT	2130	Real Estate Finance	3.00	3.00	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	2.00	2.00	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	2.00	2.00	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	2.00	2.00	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	2.00	2.00	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	3.00	3.00	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	1.00	3.00	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	1.00	3.00	Paid work activity in an appropriate business environment related to an occupational objective. One credit requires 180 hours of work. May be repeated up to 3 credits. Prerequisite: permission of site supervisor and adviser.

Subject: Bowling Green State University	Number	Long Course Title	Min Units	Max Units	Long Description
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BGSU	1000	University Seminar	3.00	3.00	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.
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Subject: Biology	Number	Long Course Title	Min Units	Max Units	Long Description
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BIOL	1010	Environment of Life	3.00	3.00	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	4.00	4.00	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	1080	Life in the Sea	3.00	3.00	Fall. Shore and ocean environments, variety and adaptations of marine life. Observations of marine organisms in marine laboratory. 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	1090	Life in Extreme Environments	3.00	3.00	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	2000	Biology Today	1.00	1.00	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	5.00	5.00	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	5.00	5.00	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	3.00	3.00	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	3.00	3.00	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	4.00	4.00	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	3.00	3.00	Fall, Spring, Summer. Microbiological and epidemiological principles as the basis of practice for nursing, dietetics, physical therapy, and other health professionals. Three one-hour lectures. No credit for microbiology or biology majors or minors.
BIOL	3150	Microbiology Laboratory for Health Professionals	1.00	1.00	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	3.00	3.00	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	4.00	4.00	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	4.00	4.00	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	3430	General Botany	4.00	4.00	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	3500	General Genetics	4.00	4.00	Fall, Spring. Theoretical and applied aspects of inheritance. Molecular, chromosomal and population levels of heredity in both prokaryotes and eukaryotes. Three one-hour lectures and one one-hour recitation session. Prerequisites: BIOL 2040 and BIOL 2050 or consent of instructor.
BIOL	3520	Laboratory in Genetics	1.00	1.00	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	3540	Population and Community Ecology	3.00	3.00	Spring. Concepts of modern ecology. Fundamental ecological principles, life history patterns, structure and growth of populations, competition, predation, succession, applied ecology and biodiversity. Three hours lecture. Prerequisite: BIOL 2040.
BIOL	3700	Introduction to Inland Marine Research	3.00	3.00	Fall. Theories and techniques for designing inland closed ecosystems for scientific research; basic concepts in marine ecology. Two hours of lecture/discussion and three hours of lab arranged. Prerequisites: BIOL 2040 and CHEM 1250. Extra fee.
BIOL	3740	Marine Biology	3.00	3.00	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	1.00	5.00	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	1.00	4.00	Fall, Spring, Summer. For advanced student who has shown proficiency and marked degree of independence in work. Individual registration. Prerequisite: four semesters of biology and consent of instructor. May be repeated once, but only four hours may be applied toward major in biology. Extra fee.
BIOL	4020	Honors Thesis	3.00	3.00	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	4.00	4.00	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	3.00	3.00	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	4.00	4.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	Spring. The use of basic ecological principles as a basis for conservation of biological diversity. Focus on the underlying ecological concepts, current techniques utilized in the field, problem-solving approaches and the issues encountered when trying to conserve natural systems in a human-dominated landscape. Prerequisite: BIOL 2040; BIOL 3500, BIOL 3540, and BIOL 4090 recommended.
BIOL	4110	Animal Physiology	4.00	4.00	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	4.00	4.00	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	3.00	3.00	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	4.00	4.00	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	3.00	3.00	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	4.00	4.00	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	3.00	3.00	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	Plant Ecology	4.00	4.00	Fall alternate even years. Physical and biological factors influencing the distribution and abundance of plant populations and communities. Three one-hour lectures and one three-hour laboratory. One weekend field trip required. Prerequisites: BIOL 2040 and BIOL 2050. Recommended: BIOL 3430, BIOL 3540 or BIOL 4510. Extra fee.
BIOL	4240	Algology	4.00	4.00	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	3.00	3.00	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	3.00	3.00	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	4.00	4.00	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	3.00	3.00	Spring. Mechanistic approaches to understanding the neural basis of animal behaviors at subcellular and systems levels in the context of life history, ecology and evolution. Prerequisite: BIOL 2040 or BIOL 2050; BIOL 3300 or PSYC 3300 strongly recommended.
BIOL	4310	Developmental Biology	3.00	3.00	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	2.00	2.00	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	4.00	4.00	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	4380	Endocrinology	4.00	4.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	2.00	2.00	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	4450	Environmental Microbiology	3.00	3.00	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	4.00	4.00	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	3.00	3.00	Spring. Molecular biology and genetic phenomena of bacteria and bacteriophage; mutagenesis and recombination. Three one-hour lectures. Prerequisites: four semesters of biology and consent of instructor. BIOL 3500 and biochemistry recommended.
BIOL	4490	Epidemiology	3.00	3.00	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	3.00	3.00	Spring, Summer. Course designed to increase understanding of evolution and the nature of science, with extensive content-rich materials, interactive exercises, primary source readings and in-depth exploration of scientific concepts. Guided by the National Science Education Standards; includes practical experience in teaching evolution and the nature of science. Does not fulfill the Biology group 2 requirement for majors. Offered on-line only. Prerequisites: BIOL 1040 or BIOL 2050 or equivalent or consent of instructor.
BIOL	4510	Evolution	3.00	3.00	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	1.00	3.00	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	1.00	3.00	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	1.00	1.00	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	3.00	3.00	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	3.00	3.00	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	1.00	1.00	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	3.00	3.00	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	3.00	3.00	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	4.00	4.00	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	1.00	1.00	Spring alternate years. Field trip to a marine environment or research station to study different marine habitats. Trips and tours of laboratory facilities, aquariums and research vessels. Course involves intensive fieldwork. Prerequisite: BIOL 3740 (may be taken concurrently). Extra fee.
BIOL	4760	Herpetology	3.00	3.00	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	3.00	3.00	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	1.00	6.00	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	1.00	6.00	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	1.00	3.00	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	1.00	1.00	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.

Subject: Business Education	Number	Long Course Title	Min Units	Max Units	Long Description
BUSE	1010	Business Mathematics	3.00	3.00	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	1.00	1.00	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	2.00	2.00	Emphasis on keyboarding speed and accuracy and production of office documents. Prerequisite: one semester of high school keyboarding or BUSE 1100 and BUSE 2610 or equivalent.
BUSE	2000	Introduction to Business and Marketing Education	2.00	2.00	Introduction to teaching and learning through business education and marketing education in public and private schools, post-secondary institutions, and private business and industry. C/F hours: 30. Transportation required.

BUSE	2400	Business Problems of the Consumer	3.00	3.00	Fall, Spring. Relationship of business practices to consumer activities. Developing consumer competencies in insurance, credit, savings, investments, housing and estate planning. Basic economic principles underlying consumer decision making. C/F hours: 10. Transportation required.
BUSE	2610	Introduction to Word Processing Applications	1.00	1.00	Fall, Spring. Introduction to word processing terminology and fundamental applications such as creating, editing, saving, and printing business documents. Extra fee.
BUSE	2620	Word/Information Processing Applications	3.00	3.00	Fall, Spring. Using formatting functions to create tables, reports, letters, resumes, mail merge documents, online forms, master documents and subdocuments, newsletters, and web pages on word processing systems. Extra fee.
BUSE	2640	Introduction to Spreadsheet Applications	1.00	1.00	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	1.00	1.00	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	1.00	1.00	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	1.00	1.00	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	1.00	1.00	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	1.00	1.00	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	1.00	1.00	Fall, Spring. Presentation and photographic image-editing software applications.
BUSE	2760	Desktop Publishing Applications	1.00	1.00	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	1.00	1.00	Fall, Spring. Introductory application techniques such as developing a web site and creating, formatting, testing, and revising a web page using Web software.
BUSE	3140	Internship in Business Education	1.00	3.00	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	1.00	3.00	Fall, Spring, Summer. Supervised experience in marketing-related businesses. 100 clock hours of work required for each hour of college credit. Interviewing and written paper also required. May be repeated up to three hours. Graded S/U. Transportation required.
BUSE	3160	Internship in Business Education and Marketing Education	1.00	4.00	Fall, Spring, Summer. Supervised business office and marketing experience. 100 clock hours of work required for each hour of college credit. Written paper also required. May be repeated up to four hours. Graded S/U. Transportation required.
BUSE	3330	Business Records Management	1.00	1.00	Fall, Spring. Principles and practices of reliable and systematic control of information and business records. No credit for both BUSE 3330 and BUSE 3350.
BUSE	4000	Basic Business in Secondary Schools	2.00	2.00	Spring. Course of study development, unit and lesson planning, and teaching basic business subjects. Prerequisite: BUSE 2000. C/F hrs: 32. Transportation required.

BUSE	4280	Interrelatedness of Business and Technology in Business Education	3.00	3.00	Fall. Integration of business and computer technology-related concepts; advanced and emerging technologies taught by business technology educators.
BUSE	4510	Career Development	2.00	2.00	Fall. Factors associated with career development. Self-exploration and management; career opportunities, assessment and resources; work ethics and expectations; and job search. Prerequisite: BUSE 2000.
BUSE	4630	Teaching and Learning Strategies for Adults	2.00	2.00	Spring. Identification of adult needs; curriculum, instruction and assessment for adults; instructional programs for adults. Prerequisites: BUSE 2000 and junior standing. C/F hours: 8. Transportation required.
BUSE	4640	Teaching and Learning in Marketing Education	2.00	2.00	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	2.00	2.00	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	4670	Teaching and Learning in Business Education	4.00	4.00	Fall. The teaching and learning process as it relates to business education including curriculum, instruction, integration of academic and business education, assessment, and student organizations. Prerequisites: BUSE 2000, BUSE 2620, BUSE 2720, BUSE 2760, BUSE 2780, BUSE 4000, EDFI 3030, ACCT 2000 or ACCT 2210, MKT 3000, MGMT 3050, and MIS 2000 or CS 1000. Minimum overall GPA of 2.4 required to enroll. Take concurrently with EDFI 4020 and BUSE 4770. C/F hours: 10. Transportation required.
BUSE	4690	Work-based Teaching and Learning	2.00	2.00	Fall. Managing and facilitating the teaching and learning process using work-based instructional and assessment strategies and connecting them to school-based instruction. Prerequisites: BUSE 2000, BUSE 4000. Take concurrently with BUSE 4640 and/or BUSE 4670, BUSE 4770. C/F hours: 8. Transportation required.

BUSE	4700	Studies in Business and Marketing Education	1.00	15.00	On demand. Offered on individual, seminar or lecture basis. Treatment of selected areas in depth depending on student needs and nature of material. May be repeated up to fifteen hours. Prerequisite: consent of instructor. Graded S/U.
BUSE	4770	Business and Marketing Education Practicum	1.00	4.00	Fall. Field experience in local schools to familiarize students with Business and/or Marketing Education teaching responsibilities, including planning, instruction, assessment, and classroom management, as well as school administration and policies, teacher duties, and student organizations. Take concurrently with BUSE 4640 and/or BUSE 4670, BUSE 4650, BUSE 4690, EDFI 4020. Transportation required.
BUSE	4860	Workshop in Business and Marketing Education	1.00	3.00	Summer. Areas of current interest to teachers in business, marketing and vocational education. Possible areas include: applied academics, employability, entrepreneurship, desktop publishing, cooperative education and postsecondary education. May be repeated.
BUSE	4970	Teaching Internship	1.00	16.00	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.

Subject: Canadian Studies	Number	Long Course Title	Min Units	Max Units	Long Description
CAST	2010	Introduction to Canadian Studies	3.00	3.00	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	3.00	3.00	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	1.00	4.00	On demand. Various topics relating to the study of Canada. May be repeated up to 8 hours if topics differ. Prerequisite: consent of instructor.

Subject: Communication Arts Technology	Number	Long Course Title	Min Units	Max Units	Long Description
CAT	1910	Principles of Communication Arts Technology	3.00	3.00	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	1.00	1.00	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	1.00	1.00	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	3.00	3.00	Technical overview of voice and video systems. Technical introduction to telephones, telephony and telecommunication systems, local and long distance technologies, computer telephony integration, video standards and delivery systems, applications in business and industry. Prerequisite: CAT 1910.
CAT	2900	Studies in Communication Arts Technology	1.00	3.00	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	3.00	3.00	Capstone experience for associate degree in CAT. Directed field research; emphasis on occupational exploration and relations between field experience and coursework. Prerequisite: CAT major.

Subject: Communication Disorders	Number	Long Course Title	Min Units	Max Units	Long Description
CDIS	1230	Introduction to Communication Disorders	3.00	3.00	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	3.00	3.00	Fall, Spring. Sounds of spoken English, their production and recognition. Applications to techniques in speech pathology and habilitations of the hearing handicapped. Prerequisite: CDIS pre-major or consent of department chair.
CDIS	2250	Speech and Language Acquisition and Development	3.00	3.00	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	4.00	4.00	Fall, Spring. Anatomical and physiological principles of the speech mechanism, including central and peripheral nervous systems. Three one-hour lectures and one two-hour laboratory. Prerequisites: CDIS major or permission of department chair. Extra fee.
CDIS	3020	Acoustics for Speech and Hearing	4.00	4.00	Fall. The nature of sound waves, simple harmonic motion, complex waves, sound transmission, and the acoustics of speech. Three one-hour lectures and one two-hour laboratory. Prerequisites: CDIS major or permission of department chair.
CDIS	3110	Phonological Assessment and Intervention	3.00	3.00	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	4.00	4.00	Fall, Spring. Overview of language disorders; principles and techniques of language evaluation and treatment. Three one-hour lectures and one two-hour laboratory. Prerequisites: CDIS 2250; CDIS major or permission of department chair. Extra fee.

CDIS	3610	Diagnostic Audiology	3.00	3.00	Spring. Anatomy and physiology of the auditory mechanism; audiometric pure-tone and speech testing; electrophysiological measures; otologic pathologies and associated hearing problems. Prerequisites: CDIS 3020; CDIS major or permission of department chair.
CDIS	4010	Clinical Methods in Communication Disorders	4.00	4.00	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	1.00	3.00	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	3.00	3.00	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 3020; CDIS major or permission of department chair.
CDIS	4710	Introduction to Communication Disorders for the Classroom Teacher	3.00	3.00	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	2.00	2.00	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	1.00	4.00	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	1.00	3.00	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.
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Subject: Technical Certification	Number	Long Course Title	Min Units	Max Units	Long Description
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CERT	2100	Paramedic National Registration-Didactic	18.00	18.00	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.
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CERT	2110	Paramedic National Registration-Lab and Clinical	7.00	7.00	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.
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CERT	2200	Radiologic Technologist National Registration (American Registry of Radiologic Technologists)-Didact	20.00	20.00	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.
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CERT	2210	Radiologic Technologist National Registration (American Registry of Radiologic Technologists)-Lab/Cl	10.00	10.00	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.
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Subject: Chemistry	Number	Long Course Title	Min Units	Max Units	Long Description
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CHEM	1000	Introduction to Chemistry	3.00	3.00	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.
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CHEM	1090	Elementary Chemistry	3.00	3.00	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.
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CHEM	1100	Elementary Chemistry Laboratory	1.00	1.00	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	4.00	4.00	Fall, Spring. Not accepted toward chemistry major or minor. Survey of principles of organic and biochemistry, with medical applications. Prerequisites: CHEM 1090 or CHEM 1250, proficiency examination or consent of instructor. Applicable to the BG Perspective (general education) natural sciences requirement.
CHEM	1250	General Chemistry	5.00	5.00	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	4.00	4.00	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	1.00	1.00	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	5.00	5.00	Fall. General chemistry sequence for well-prepared students. Three lectures, one recitation, one three-hour laboratory. Prerequisites: high school chemistry or CHEM 1090 and CHEM 1100. Corequisite: MATH 1300 or MATH 1310. Applicable to the BG Perspective (general education) natural sciences requirement. Extra fee.
CHEM	1370	General Chemistry	4.00	4.00	Spring. CHEM 1350 continued. Four lectures. Prerequisites: C or better in CHEM 1350, or B or better in CHEM 1250 and consent of instructor. Corequisite: CHEM 1380. Applicable to the BG Perspective (general education) natural sciences requirement.
CHEM	1380	General Chemistry Laboratory	1.00	1.00	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	3.00	3.00	Fall, Spring. A survey of the field of forensic science--the application of science to the law. Topics include the identification, proper collection, storage, documentation, and analysis of evidence through microscopy, wet chemistry, spectroscopic methods, toxicology, serology, DNA typing and fingerprinting. No prerequisites. Not accepted toward chemistry major or minor. Applicable to the BG Perspective (general education) natural sciences requirement.
CHEM	1990	Introduction to Elementary Organic Chemistry	1.00	1.00	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	3.00	3.00	Fall. 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	4.00	4.00	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. Extra fee.
CHEM	3080	Basic Biochemistry	3.00	3.00	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.
CHEM	3090	Elementary Biochemistry Laboratory	1.00	1.00	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	1.00	3.00	Fall, Spring, Summer. Specific topics of current interest in chemistry. Not applicable toward minimum 32-hour major or 20-hour minor. May be repeated with different topics.
CHEM	3410	Organic Chemistry	5.00	5.00	The first course of a two-semester sequence of organic chemistry. Nomenclature, bonding, and reactivity of common functional groups. Topics include three-dimensional structure (stereochemistry), electron-pushing mechanisms, electron delocalization, molecular orbital theory and modern instrumental techniques. Laboratory experiences include chemical separations, examination of reaction selectivity, and isolation of natural products. Prerequisites: CHEM 1280 or CHEM 1380. Extra fee.

CHEM	3440	Organic Chemistry	3.00	3.00	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, pericyclic reactions, and the chemistry of drugs. Three lectures. Prerequisite: C or better in CHEM 3410. Corequisite: CHEM 3450 or CHEM 3460.
CHEM	3450	Organic Chemistry Laboratory	2.00	2.00	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	1.00	1.00	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	3.00	3.00	Spring. Three lectures. A survey course of Physical Chemistry. For students whose program does not require full-year course. Prerequisites: CHEM 1270-CHEM 1280 and CHEM 2010 or CHEM 1370-CHEM 1380, MATH 1300. Prerequisite or corequisite: PHYS 2020 or PHYS 2120.
CHEM	3630	Advanced Inorganic Laboratory	2.00	2.00	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	1.00	1.00	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	4.00	4.00	Fall. Four lectures. Thermodynamics and quantum chemistry. Prerequisites: CHEM 1370-CHEM 1380 or CHEM 1270-CHEM 1280 and CHEM 2010; MATH 2320 and either PHYS 2120 or PHYS 2020. Corequisite: CHEM 4070.
CHEM	4060	Physical Chemistry	4.00	4.00	Spring. CHEM 4050 continued. Electrochemistry, kinetics, spectroscopy and molecular structure. Prerequisite: CHEM 4050.
CHEM	4070	Integrated Analytical and Physical Laboratory	2.00	2.00	Fall. Two three-hour laboratories. Principles of measurement; spectral, chromatographic and electroanalytical techniques; thermodynamic and kinetic measurements; computerized data acquisition. Prerequisite or corequisite: CHEM 4050 or CHEM 3520. Extra fee.
CHEM	4080	Integrated Analytical and Physical Laboratory	2.00	2.00	Spring. CHEM 4070 continued. Prerequisite: CHEM 4070; prerequisite or corequisite: CHEM 4060. Extra fee.
CHEM	4130	Undergraduate Research	1.00	3.00	Fall, Spring, Summer. Independent study and research. Three to nine hours of laboratory, one half-hour conference each week. Not applicable toward minimum requirements of major or minor. Prerequisites: consent of instructor, 20 hours of CHEM or consent of department, 2.5 minimum overall GPA. May be repeated, but no more than six hours credit may be applied toward degree.
CHEM	4160	Bioinorganic Chemistry	3.00	3.00	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	3.00	3.00	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	3.00	3.00	Fall. Three lectures. Structure, function, chemical, and physical properties of biomolecules with an emphasis on biomacromolecules. Prerequisite: CHEM 3440 and CHEM 3450 or CHEM 3460. BIOL 2050 is strongly recommended.

CHEM	4460	Biochemistry Laboratory	1.00	1.00	Fall. Experimental techniques in biochemistry. Three-hour laboratory. Prerequisite or corequisite: CHEM 4450. Extra fee.
CHEM	4470	General Biochemistry	3.00	3.00	Spring. Three lectures. Energetics and regulation of metabolic processes. Prerequisite: CHEM 4450.
CHEM	4540	Instrumental Methods of Analysis	3.00	3.00	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	3.00	3.00	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	3.00	3.00	Fall. Organic structure determination by spectroscopic techniques, with emphasis on infrared, ultraviolet and nuclear magnetic resonance spectroscopy, and mass spectrometry. Prerequisite: CHEM 3440 and CHEM 3450 or CHEM 3460. Prerequisite or corequisite: CHEM 4050.
CHEM	4830	Advanced Topics in Chemistry	1.00	3.00	Fall, Spring, Summer. Rigorous study of specific topics of current interest. Not applicable toward minimum 32-hour major or 20-hour minor. May be repeated with different topics. Prerequisite: CHEM 3440 and CHEM 3450 or CHEM 3460 or consent of instructor.

Subject: Chinese	Number	Long Course Title	Min Units	Max Units	Long Description
CHIN	1010	Elementary Language and Culture I	4.00	4.00	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	4.00	4.00	CHIN 1010 continued. Four class periods and laboratory practice each week. Prerequisite: CHIN 1010 or one year of high school Chinese, or equivalent. Applicable to the BG Perspective (general education) humanities and arts and international perspective requirements.

CHIN	2010	Intermediate Chinese I	4.00	4.00	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	4.00	4.00	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	3.00	3.00	Contemporary life in Chinese societies and crosscultural study of Chinese values. Study of culture as displayed in societal institutions and the arts. Presentations, readings, discussions, and writing in English. Applicable to the BG Perspective (general education) humanities and arts and international perspective requirements.
CHIN	3000	Selected Topics in Chinese Language and Culture	2.00	6.00	Topic chosen from language, culture or literature to meet curriculum needs and student requests both on campus and in a study abroad setting. May be repeated with different topics up to 12 hours. Prerequisite: consent of instructor.
CHIN	4800	Selected Topics in Chinese	1.00	3.00	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	1.00	3.00	Independent reading for the advanced student. Prerequisites: arrangement with the instructor and consent of department chair prior to registration. May be repeated.

Subject: Classical Civilization	Number	Long Course Title	Min Units	Max Units	Long Description
CLCV	2410	Great Greek Minds	3.00	3.00	Fall, Summer. Masterpieces of Greek literature in English translation: Homer, Sappho, Pindar, Aeschylus, Sophocles, Euripides, Aristophanes, Herodotus, Thucydides, Plato, Aristotle. Introduction to history, art, customs, and beliefs. No Greek required. No credit for both CLCV 2410 and CLCV 4850. Applicable to the BG Perspective (general education) humanities and arts requirement.

CLCV	2420	Great Roman Minds	3.00	3.00	Spring. Masterpieces of Latin literature in English translation: Lucretius, Cicero, Catullus, Virgil, Horace, Livy, Ovid, Petronius, Tacitus, Juvenal, Martial. An introduction to history, art, customs and beliefs. No Latin required. No credit for both CLCV 2420 and CLCV 4860. Applicable to the BG Perspective (general education) humanities and arts requirement.
CLCV	2450	Word Power from Greek and Latin Roots	3.00	3.00	Spring. Terms and concepts derived from Greek and Latin occurring in English; designed for premedical, pre dental, prelaw, language, sciences majors.
CLCV	3800	Classical Mythology	3.00	3.00	Spring. Study in English of Greek and Roman myths; historical meanings and influence on life, literature and art. No Latin required. Applicable to the BG Perspective (general education) humanities and arts requirement.
CLCV	3810	Roman Life	3.00	3.00	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	3.00	3.00	Fall, Spring. Study in English of the drama of ancient Greece and Rome in its social and performance contexts. Special attention will be paid to pragmatic issues of stagecraft and dramaturgy. No Latin or Greek required.
CLCV	3880	Topics in Classical Civilization	1.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	On demand. Learn about teaching CLCV, GRK, or LAT course under the guidance of an experienced teacher. Student apprentice duties vary. Course cannot be used in partial fulfillment of CLCV or LAT major or minor. May be repeated to six credit hours. Prerequisite: consent of instructor.

Subject: Communication	Number	Long Course Title	Min Units	Max Units	Long Description
COMM	1020	Introduction to Communication	3.00	3.00	Fall, Spring, Summer. Basic principles of interpersonal communication, small-group communication and public speaking; exercises and activities in each area with attention to individual needs.
COMM	1990	Intercollegiate Forensic Activities	1.00	1.00	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	3.00	3.00	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	3.00	3.00	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.
COMM	2050	Presentational Speaking in Organizations	3.00	3.00	Fall, Spring. Principles of public communication, composition and public speaking, including practice. Prerequisite: IPC 1020.
COMM	2070	Interpersonal Communication	3.00	3.00	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	3.00	3.00	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	Interpersonal Communication in International Contexts	3.00	3.00	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	3.00	3.00	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	Persuasive Communication	3.00	3.00	Fall, Spring, Summer. Theories and concepts of persuasive communication; attitude change, audience analysis and strategies of persuasion. Prerequisites: COMM 1020 and COMM 2010, or consent of instructor.
COMM	3040	Leadership in Communication	3.00	3.00	Fall. Conceptions, methods and techniques of leadership related to communication. Emphasis on understanding and application of communication theories to leadership. Prerequisites: COMM 1020 and COMM 2010, or consent of instructor.
COMM	3060	Interpersonal Communication	3.00	3.00	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	3.00	3.00	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 online delivery.
COMM	3080	Argumentation	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3950	Workshop on Current Topics	1.00	3.00	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	1.00	1.00	Fall, Spring. For juniors and seniors; similar to COMM 1990. May be repeated for four credits. Extra fee.
COMM	4020	Political Communication	3.00	3.00	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	3.00	3.00	Fall, Spring. Communication skills in conflict situations in dyadic, group, and organizational settings; negotiation, mediation, and arbitration processes. Prerequisites: COMM 1020 and COMM 2010, or consent of instructor.
COMM	4050	Computers Mediating Cultures and Organizations	3.00	3.00	This course explores how meaning-making processes and social formations shape communication and cultures within computer-based technological environments in a variety of contexts. We critically examine theory and practice of producing online multimediated spaces. Prerequisites: COMM 1020 and COMM 2010, or consent of instructor.

COMM	4060	Topics in Communication Studies	3.00	3.00	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 Ed.
COMM	4070	Relational Communication	3.00	3.00	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	3.00	3.00	Fall. Communication variables in intercultural contexts. Culture and meaning, communication values in intercultural dialogue, culture as symbolic worldview, culture shock, conflict resolution across cultures. Prerequisites: COMM 1020 and COMM 2010, or consent of instructor.
COMM	4090	International Communication	3.00	3.00	Fall, Spring. Relationships between communication and national cultures. Background theory and research in international communication encourages an appreciation of communication similarities and differences across nations. Applied development of international and global communication competence. Prerequisites: COMM 1020 and COMM 2010, or consent of instructor. Approved for Distance Ed.
COMM	4110	Performing Digitally Mediated Identities and Communication	3.00	3.00	This course examines how digital media shape and structure interpersonal and intercultural communication. Drawing on theories of interpersonal communication, culture, race and gender, this course exposes students to a variety of digitally mediated socio-cultural spaces and engages them in an indepth critique and understanding of such communication contexts. Prerequisites: COMM 1020 and COMM 2010, or consent of instructor.

COMM	4120	Communication and Gender	3.00	3.00	Fall, Spring. Theories and principles of communication, gender, and power issues in multiple contexts (interpersonal relationships among friends, family, and romantic partners, within organizations, media and advertising, and the academy). Prerequisites: COMM 1020 and COMM 2010, or consent of instructor.
COMM	4180	Communication Ethics	3.00	3.00	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 and COMM 2010, or consent of instructor.
COMM	4200	Communication, Race, and Power	3.00	3.00	In this course, we will work together to investigate underlying racial politics in a number of contexts, seeking an understanding of those power structures that are often buried beneath our normalized communication practices. Our work will examine how race is constructed through our communication. Prerequisites: COMM 1020 and COMM 2010, or consent of instructor.
COMM	4220	Technology for World Communication	3.00	3.00	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 and COMM 2010, or consent of instructor.
COMM	4300	Rhetoric of Social Movements	3.00	3.00	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	3.00	3.00	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	1.00	10.00	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	1.00	3.00	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 Interpersonal Communication	1.00	3.00	Fall, Spring, Summer. Supervised readings on topics of current or specialized interest in interpersonal communication. Prerequisites: COMM 1020 and COMM 2010, or consent of instructor. Graded S/U. Not repeatable.

Subject: Construction Management & Technology					
	Number	Long Course Title	Min Units	Max Units	Long Description
CONS	1010	Topics in Construction	2.00	2.00	Fall. Introduction to career objectives in a seminar setting with construction professionals. Introduces team building, professional practices, current issues in construction through readings and discussions of construction trade journals. Two hours lecture. Extra fee.
CONS	2350	Introduction to Construction	3.00	3.00	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	3.00	3.00	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.
CONS	3060	Residential Construction	3.00	3.00	Spring. Residential and light commercial construction, including principles of project organization, market and site analyses, cost estimating, scheduling, financial management, construction techniques, contracting and marketing. One and one-half hour lecture, three hours laboratory. Prerequisites: Matriculated in CMT, AED or CMT/AED Dual Major. Extra fee.
CONS	3180	Construction Surveying	3.00	3.00	Fall. Detailed study of surveying, including field work, with equipment such as transit, level and tape. Emphasis on closure. One and one-half hours of lecture and three hours of laboratory. Prerequisites: Matriculated in CMT, AED or CMT/AED Dual Major. Extra fee.
CONS	3200	Computer Application in Construction	3.00	3.00	Fall and Spring. Computer applications of construction programs in the areas of materials, methods and management. Two hours lecture, two hours laboratory. Prerequisite: Matriculated student in CMT, AED or CMT/AED Dual Major. Extra fee.
CONS	3350	Construction Materials and Testing	3.00	3.00	Fall and Spring. Materials and testing as used in commercial construction. Emphasis on foundation, sitework, soils and concrete. One and one-half hours of lecture and three hours laboratory. Prerequisite: Matriculated in CMT, AED or CMT/AED Dual Major. Extra fee.
CONS	3360	Structural Design	3.00	3.00	Fall and Spring. Standard methods utilizing shear and bending stresses to size structural members. Emphasis on floor framing systems, columns and connections in steel and wood per design codes. Two hours of lecture and two hours laboratory. Prerequisites: ENGT 2400, PHYS 2010 and Matriculated in CMT, AED or CMT/AED Dual Major. Extra fee.

CONS	3370	Heating, Ventilating and Air Conditioning Systems	3.00	3.00	Spring. Mechanical systems for heating, ventilating, air conditioning cooling of buildings and in production processes. Experience with conventional and solar mechanical systems; determining losses, make-up, system sizing, control. Methods, materials and problems encountered in installing mechanical systems are stressed. One and one-half hours of lecture and three hours laboratory. Prerequisite: Matriculated in CMT, AED or CMT/AED Dual Major. Extra fee.
CONS	4000	LEED and Lean Fundamentals	3.00	3.00	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	3.00	3.00	Fall and Spring. Design and construction of concrete structures. Placement of temporary framework including sheathing, bracing and shores. Concrete design of slabs, beams and columns. Three hours of lecture. Prerequisites: CONS 3360 and Matriculated in CMT, AED or CMT/AED Dual Major.
CONS	4110	Construction Safety and Health Management	3.00	3.00	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	3.00	3.00	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 CMT, AED or CMT/AED Dual Major. Extra fee.

CONS	4370	Construction Equipment	3.00	3.00	Fall. Equipment factors related to construction operations. Ownership and operating costs and productivity of major construction equipment; frequent down-time items. One and one-half hours of lecture and three hours laboratory. Prerequisite: Matriculated in CMT, AED or CMT/AED Dual Major. Extra fee.
CONS	4390	Estimating and Cost Control	3.00	3.00	Fall, Spring. Take-off, costing and pricing for typical construction project. Preparation of final bid document including all material, labor, equipment, overhead costs, and profit margin. Two hours of lecture and two hours of laboratory. Prerequisites: CONS 3200 and Matriculated in CMT, AED or CMT/AED Dual Major. Extra fee.
CONS	4400	Construction Contracting	3.00	3.00	Fall, Spring. Type of construction procurement, contracts and specifications important to project management. Subcontracting, insurance, bonds, mechanics liens and labor relations. Concepts applied to cases. Two hours lecture, two hours laboratory. Prerequisite: Matriculated in CMT, AED, CMT/AED Dual Major, AMO, or ATM.
CONS	4420	Construction Scheduling	3.00	3.00	Fall and Spring. Management utilizing critical path method, activity on arrow, Gantt charts and PERT techniques. Planning, scheduling, control, resource allocation and least-cost expediting using computers. Two hours lecture, two hours laboratory. Prerequisites: CONS 3200 and Matriculated in CMT, AED, CMT/AED Dual Major, AMO, or ATM. Extra fee.
CONS	4470	Trenchless Technology Construction	3.00	3.00	Spring. Introduction to the different trenchless techniques including identification and quantification of the different components of each technique along with their advantages and disadvantages. One and one-half hours lecture, three hours laboratory. Prerequisite: Matriculated in CMT, AED or CMT/AED Dual Major. Extra fee.
CONS	4700	Construction Capstone Project	3.00	3.00	Fall, Spring. Formulate a construction project manual using several software packages. The comprehensive manual includes schedule, quantity survey, estimate, project management considerations and a panel defense. Prerequisites: CONS 4390 or CONS 4420 and Matriculated in CMT, AED or CMT/AED Dual Major. Extra fee.

CONS	4900	Problems in Construction Technology	1.00	3.00	For advanced students wanting to conduct intensive study of selected problems in construction technology. May be repeated. Prerequisite: Consent of instructor and Matriculated in CMT, AED or CMT/AED Dual Major.
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Subject: Cooperative Education	Number	Long Course Title	Min Units	Max Units	Long Description
COOP	50	Cooperative Internship or Academic Internship	0.00	0.00	Fall, Spring, Summer. Work and study in business and industry, service or government agency in a supervised position related to major. May be repeated. Prerequisite: consent of cooperative education program.

Subject: Criminal Justice	Number	Long Course Title	Min Units	Max Units	Long Description
CRJU	2100	Introduction to Criminal Justice	3.00	3.00	Fall, Spring. Philosophical, historical, operational aspects of criminal justice agencies and processes in a framework of social control in a democracy. Crime and corrections problems and response of criminal justice agencies to them.
CRJU	2200	Law Enforcement in American Society	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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.

CRJU	3200	Crime Prevention and Security	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3950	Workshop - Current Topics	1.00	3.00	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	4100	Victimology	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	4700	Independent Study in Criminal Justice	1.00	3.00	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	3.00	3.00	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, completion of 25 hours of CRJU core courses, and CRJU 2100.
CRJU	4860	Workshop in Criminal Justice	1.00	3.00	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	1.00	12.00	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	3.00	3.00	Fall, Spring, Summer. Analysis of problems and experiences encountered in the practicum. Relations between field experiences, coursework and related literature. Prerequisite: permission of director. Corequisite: CRJU 4910.

Subject: Computer Science	Number	Long Course Title	Min Units	Max Units	Long Description
CS	1000	Computer Basics	3.00	3.00	Fall, Spring, Summer. Computer technology and related social issues. Hardware, software, applications in diverse areas. Problems concerning computerized services, data banks, governmental controls. Problem solving using software packages (such as hypertext, spreadsheets, word processing, database, presentation graphics, etc.). Credit not applicable toward a major in computer science. Prerequisite: one year of high school algebra or MATH 95. Extra fee.
CS	1010	Introduction to Programming	3.00	3.00	Fall, Spring, Summer. Algorithms. Programming language features: expressions, assignments, functions with parameters, conditions, loops, arrays. Several programming assignments required. Does not apply to the computer science major. Prerequisite: two years of high school algebra or MATH 95. Extra fee.

CS	1800	Introductory Topics	1.00	3.00	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	1.00	3.00	Introduction to the use of a programming language or other computer software. Can be repeated to three hours if topics differ. Credit not applicable to major in computer science. Graded S/U.
CS	2010	Programming Fundamentals	3.00	3.00	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: Prior credit or concurrent registration in a 1000-level MATH course, or a math placement score of at least 41.
CS	2020	Object-oriented Programming	3.00	3.00	Fall, Spring, Summer. Introduction to object-oriented programming techniques. Constructors, destructors, operator overloading. Inheritance and polymorphism. Elementary data structures including linked lists. Dynamic storage allocation concepts. Prerequisite: Grade of C or better in CS 2010.
CS	2170	Computer Organization	3.00	3.00	Fall, Spring, Summer. Organization of digital computer hardware. Combinational and sequential circuits. Assembly language concepts. ALU, CPU, and control unit design. Projects will be implemented on a circuit simulator. Prerequisite: CS 2010.
CS	2800	Intermediate Topics	1.00	3.00	Introduction to use of a programming language or other computer software. For students who already know how to program. Can be repeated to three hours if topics differ. Credit not applicable to major in computer science. Prerequisite: CS 1010 or CS 2010 or equivalent.
CS	2900	Co-op Preparation	1.00	1.00	Fall. Introduction to the co-op experience. Resumes. How to work a job fair and how to interview. Job search strategies. Professional ethics and etiquette. Credit not applicable to a major in computer science. Prerequisite or corequisite: CS 2020. Graded S/U.
CS	3000	Professional and Societal Issues in Computing	3.00	3.00	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: CS 2010 or equivalent.

CS	3010	Information Management Technologies	3.00	3.00	Spring. An introduction to technologies of current importance in information management application development, such as database management, computer graphics, artificial intelligence, and web development. Prerequisite: CS 2020.
CS	3140	Web Application Development	3.00	3.00	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	3.00	3.00	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	3240	Usability Engineering	3.00	3.00	Spring. User interface design and human-computer interaction. Understanding the user. Design and prototyping of highly usable interfaces. Design notations, dialog styles, screen layouts, and usability testing. Event-driven programming language for rapid prototyping. Prerequisite: CS 2020.
CS	3270	Operating Systems and Networks	3.00	3.00	Fall. Design of multiprocessing operating systems, process scheduling and synchronization. Device drivers and communication hardware. Networks and their topologies. Communication protocols and client/server environments with implication for operating system services and user programs. Prerequisites: CS 2020 and CS 2170.
CS	3350	Standard Data Structures and Algorithms	3.00	3.00	Fall. Advanced programming concepts. Adaptation and use of standard class libraries and generic algorithms. Prerequisite: CS 2020.
CS	3600	COBOL Programming	3.00	3.00	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	1.00	1.00	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	2.00	2.00	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	1.00	3.00	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	1.00	6.00	For students working in internship or co-op programs. Written report required. Does not apply to major or minor in computer science. May be repeated to three hours. Students working through the co-op office may earn up to six hours of credit. Prerequisite: consent of department. Graded S/U.
CS	4080	Advanced Operating Systems	3.00	3.00	Spring. Structure of operating systems. Physical input-output, buffering, interrupt processing. Memory, processor, device, information management; resource management interdependencies. Job and processor scheduling. Prerequisite: CS 3270.
CS	4090	Language Design and Implementation	3.00	3.00	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	3.00	3.00	Fall (odd years.) Various types of languages (context-sensitive, context-free, regular). Discussion of recognition devices such as pushdown automata, linear bounded automata and Turing Machines. Some topics of current interest. Prerequisite: MATH 2220 or MATH 3220.
CS	4170	Introduction to Parallel Computing	3.00	3.00	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	3.00	3.00	Summer (odd years). Intermediate AI programming with application to representative problems requiring searching, reasoning, planning, matching, deciding, parsing, seeing and learning. Prerequisite: Junior or senior standing.

CS	4250	Computer Graphics	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	Fall. Study of numerical methods for interpolation and approximation, integration and differentiation, solution of non-linear equations and systems of linear and non-linear equations. Prerequisites: CS 1010, or CS 2010 and MATH 3320. Not open to students with credit for MATH 4510.
CS	4520	Numerical Analysis	3.00	3.00	Spring. Numerical methods for the algebraic eigenvalue problem, solutions of ordinary differential equations; topics from approximation theory, numerical solution of partial differential equations, optimization techniques and sparse matrix computations. Prerequisites: CS 4510 and MATH 3370. Not open to students with credit for MATH 4520.
CS	4620	Database Management Systems	3.00	3.00	Spring. Semantic models for conceptual and logical design of databases. Detailed study of relational systems: design, dependency and normal forms. Use of interactive and embedded query language. Overview of topics such as database connectivity, security and object-oriented systems. Prerequisite: CS 2020.

CS	4640	Software Development	3.00	3.00	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	1.00	3.00	Prerequisite: consent of instructor. May be repeated up to six hours.
CS	4900	Independent Project	1.00	3.00	Readings and/or computer implementations in area of interest to individual student. Does not apply to a major in computer science. May be repeated up to six hours. Graded S/U.

Subject: Computer Science Technology	Number	Long Course Title	Min Units	Max Units	Long Description
CST	1000	Introduction to Programming Logic and Design	1.00	1.00	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	1.00	1.00	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	3.00	3.00	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	1.00	1.00	Introduction to the creation of pages for the World Wide Web. Pages will be created using text editor. Features to be implemented include text formatting, links, text and background colors, images and image formats, maps, tables, and frames. Prerequisite: CS 1000 or MIS 2000 or permission of CPT program director. Offered at Firelands only. Approved for Distance Ed.
CST	1360	Advanced Web Page Development	1.00	1.00	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	2.00	2.00	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	2.00	2.00	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	3.00	3.00	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	2.00	2.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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 Database Systems	3.00	3.00	Database principles using package in current, general use on microcomputers. Actual application of software capabilities in realistic situations. Prerequisite: CS 1010 or permission of instructor. Extra fee.
CST	2650	Systems and Procedures	3.00	3.00	Continued study of the design and implementation of data systems as they apply to business. Integrated management information systems are created using contemporary microcomputer software packages. Prerequisite: CST 2610 or permission of instructor. Extra fee.
CST	2750	Microcomputer Hardware Systems	3.00	3.00	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	3.00	3.00	Installation and configuration of microcomputer network and Internet servers. Networking hardware, software, protocols, functions. Two hours lecture, two hours lab weekly. Prerequisites: CST 1810 or permission of instructor.
CST	2850	Network Security Principles	3.00	3.00	Computer network security terminology and technology overview. Hardware, software, and policy issues. Ethics of network security. Activities include probing, testing, and securing networks using current commercial operating systems. Two hours lecture, two hours lab per week. Prerequisite: CST 1810 or permission of instructor.
CST	2900	Experimental Studies in Computer Science	1.00	3.00	Contemporary computer topics. May be repeated up to 9 credits if topics vary.
CST	2910	Field Experience	1.00	3.00	Paid field work in data processing or computer networking applications related to an occupational objective. One credit requires 1800 hours of work. May be repeated up to 3 credits. Prerequisite: permission of site supervisor and adviser.

Subject: Dance	Number	Long Course Title	Min Units	Max Units	Long Description
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DANC	1010	Folk and Square Dance	1.00	1.00	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	1.00	1.00	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	2.00	2.00	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	1.00	1.00	Fall, Spring, Summer. Two contact hours. For student with limited to no previous dance training. Studio instruction of basic tap dance technique and historical origins. May be repeated to four hours.
DANC	1150	Modern Dance Technique and Theory I	3.00	3.00	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	2.00	2.00	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	3.00	3.00	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	2.00	2.00	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	3.00	3.00	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	2.00	2.00	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	1.00	1.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	1.00	4.00	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	1.00	3.00	Intensive study of selected topics in dance. May be repeated up to 12 credit hours if topics are different.
DANC	4220	Dance Repertory II	1.00	1.00	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	3.00	3.00	Fall alternate years. The effects of culture, philosophy, persons and events on dance from primitive times to 1900s.
DANC	4250	Dance History II	3.00	3.00	Spring alternate years. Dance developments from 1900 to present; influential events, personalities, technologies and philosophies.
DANC	4260	Dance Production	3.00	3.00	Spring. Classroom and hands-on experience; problems and techniques in dance lighting, sound, costuming, direction, publicity and general management.
DANC	4270	Choreography & Design	3.00	3.00	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	1.00	3.00	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	1.00	6.00	Fall, Spring, Summer. Under supervision of dance faculty in School of HMSLS; petitioning required before registration; credit hours approved by dance faculty. Prerequisites: DANC 3870 and overall 2.5 GPA. May be repeated.

Subject: Mechanical Design	Number	Long Course Title	Min Units	Max Units	Long Description
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DESN	2050	Desn Representatn II	3.00	3.00	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	1.00	3.00	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	1.00	3.00	Independent Study. For advanced students wanting to conduct intensive study of selected problems in design technology. Prerequisite: junior standing and consent of adviser. May be repeated. Graded S/U.

Subject: Human Services	Number	Long Course Title	Min Units	Max Units	Long Description
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DHS	3000	Research Methods for the Human Services	3.00	3.00	Fall, Spring. Survey of research methods including research design, measurement and sampling, survey, experimental and field methods and data collection and analysis. Emphasis on interpreting and critically evaluating research for human services. Prerequisite: CRJU, SOWK, or GERO major or LTC specialization.
DHS	3300	Interviewing and Observation	3.00	3.00	Fall, Spring. Development of interviewing and observational skills used in working with diverse populations in human service fields. Examine interviewing from various perspectives for different purposes: clinical, forensic, organizational, and social. Prerequisite: CRJU, SOWK, or GERO major or LTC specialization.

Subject: Economics	Number	Long Course Title	Min Units	Max Units	Long Description
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ECON	2000	Introduction to Economics	3.00	3.00	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.
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ECON	2020	Principles of Microeconomics	3.00	3.00	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	3.00	3.00	Fall, Spring. National income and employment, inflation, banking system, monetary and fiscal policy; economic growth and development; international economics. Develops students' understanding of tradeoffs and enhances critical reasoning abilities. Prerequisite: ECON 2020 or with consent of department. Applicable to the BG Perspective (general education) social sciences requirement.
ECON	3010	Price Theory and Applications	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	Fall. Survey of government finance. Public expenditures, taxation and debt; emphasis on federal level. Prerequisites: ECON 2020 and ECON 2030 or consent of instructor.
ECON	4400	Women, The Economy and Society	3.00	3.00	Spring. Role of gender in the world economy, varieties of feminism, feminization of poverty, the relationship between household and labor market roles, the integration of women into the working world, causes of and responses to the gender wage gap, causes and alternative reactions to sex discrimination in labor markets. Prerequisite: ECON 2020 or consent of instructor.
ECON	4520	International Monetary Economics	3.00	3.00	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	3.00	3.00	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	3.00	3.00	Spring. Urban spatial theory and analysis, economic analysis of urban problems including poverty, housing, transportation, the environment and public finance. Prerequisites: ECON 2020 and ECON 2030.
ECON	4720	Comparative Economic Systems	3.00	3.00	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	3.00	3.00	Fall. Development of economics and economic analysis from Adam Smith to J.M. Keynes. Prerequisites: ECON 2020 and ECON 2030.
ECON	4760	Seminar in Contemporary Economic Problems	3.00	3.00	On demand. Interested students should consult with chair of department.
ECON	4910	Studies in Economics	1.00	3.00	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	3.00	6.00	On demand. For economics major with accumulative GPA of 3.0; normally culminates in treatise or comprehensive examination which must receive approval of department. Consult department chair. Prerequisite: consent of department.

Subject: Electronics & Computer Technology					
	Number	Long Course Title	Min Units	Max Units	Long Description
ECT	1000	Electric Codes and Regulations	1.00	1.00	National Electric Code and its application to wiring installations. Electric principles that dictate the provisions of the code. Wiring installations are examined for adequacy and compliance with the code.
ECT	1910	Energy, Power, Instrumentation and Control	3.00	3.00	Principles of automated systems, how machines work and emphasizing energy, power, measurement and controlling devices. One and one-half hour lecture and three hours laboratory. Extra fee.

ECT	1960	Electrical-Electronic Systems	3.00	3.00	Fall, Spring. Electrical principles, instruments, electrical machines, selected electronic devices and computer control systems. Also, fabrication and assembly techniques are covered. One and one-half hours of lecture and three hours of laboratory. Prerequisite: None. Extra fee.
ECT	2400	Electric Circuits	3.00	3.00	Fall. Electron theory; DC and AC units and theory; circuit components; circuit analysis techniques; RLC circuits; power concepts; use of test instruments. Two hours lecture and two hours laboratory. Prerequisite: MATH 1280 or equivalent or consent of instructor. Extra fee.
ECT	2410	Electronic Circuits	3.00	3.00	Spring. Analog and digital electronic circuits and semiconductors. Design and application of power supplies, amplifiers, oscillators and digital gates to communication, instrumentation and process control. Two hours of lecture and two hours of laboratory. Prerequisite: ECT 2400 or permission of instructor. Extra fee.
ECT	2440	Communication Circuits	3.00	3.00	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	4.00	4.00	Applications of principles of communications circuits to large and complex systems including telecommunications. Techniques of transmission and radiation of electromagnetic energy applied to pulse, television and microwave systems. Six hours of lecture and laboratory. Prerequisite: ECT 2410. Extra fee.
ECT	2470	Electrical Measurements and Instrumentation	3.00	3.00	Electrical measurement and instrumentation devices, transducers and elements; principles underlying their design and use. Two hours of lecture, three hours of laboratory. Prerequisite: ECT 2410. Extra fee.
ECT	2480	Industrial Equipment and Controls	3.00	3.00	Automation and industrial control principles. Study and application of typical devices such as time control switches, motor controls, servo-mechanism, photoelectric switches. Two hours of lecture, three hours of laboratory. Prerequisite: ECT 2410. Extra fee.

ECT	2490	Digital Electronic Components and Systems	3.00	3.00	Spring. Basic digital system logic analysis and synthesis techniques; number systems and codes; Boolean algebra and circuit minimization techniques. Characteristics of modern digital integrated circuit components. Two hours lecture and three hours of laboratory. Prerequisite: ECT 1910 or ECT 1960 or consent of instructor. Extra fee.
ECT	2500	Real Time Microcomputer Systems for Industrial Control	4.00	4.00	Principles and practices of interfacing microcomputers in the real time environment of industrial process control. Organization and operation of computers, various process control modules (A/D and D/A), signal conditioning and converting, and design of process control systems. Three hours of lecture, three hours of laboratory. Prerequisite: ECT 2490 or consent of instructor. Extra fee.
ECT	2900	Studies in Electronic Technology	1.00	3.00	Experimental study projects, seminars and workshops dealing with topics in industrial technology. May be repeated up to six credits if topics vary.
ECT	3000	Electric Machinery and Controls	3.00	3.00	Spring. Electric motors, generators, power electronic controls; operating characteristics, selection, testing and control of direct current, single and three-phase machinery. One and one-half hours of lecture and three hours laboratory. Prerequisite: ECT 2410. Extra fee.
ECT	3100	Programmable Logic Controllers	3.00	3.00	Fall. A study of programmable logic controllers including, programming in ladder diagrams for counting, sequencing and timing functions, input/output modules, planning, installation and applications. One and one-half hours of lecture and three hours of laboratory. Prerequisite: ECT 1960. Extra fee.
ECT	3410	Electronic Devices	3.00	3.00	Fall. A study of semiconductor devices, FET transistors, operational amplifiers, power-electronic and optoelectronic devices including theory of operation, specifications, performance testing and applications. One and one-half hours lecture and three hour laboratory. Prerequisite: ECT 2410 or consent of instructor. Extra fee.
ECT	3440	Electronic Communication Circuits	3.00	3.00	Spring. The principles of electronic circuits as applied to large and complex telecommunication systems. One and one-half hours lecture and three hours laboratory. Prerequisite: ECT 2410. Extra fee.

ECT	3490	Digital Computer Analysis	3.00	3.00	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: ECT 2490 or consent of instructor. Extra fee.
ECT	3570	Electrical Power Transmission	3.00	3.00	Fall odd years. Power converters, polyphase distribution systems including conductors, transformers, voltage regulation, protection, control, phasing and metering. Electrical codes, methods and materials used in electric installation. Problems in electrical construction work. One and one-half hours lecture and three hours laboratory. Prerequisite: ECT 1910 or ECT 1960. Extra fee.
ECT	3580	Digital Electronics	4.00	4.00	Fall. Digital integrated circuit devices with medium and large scale applications. Digital families, their functions, use of specification sheets, discussion of digital system. Two and one-half hours lecture and three hours laboratory. Prerequisite: ECT 2410 or PHYS 2020.
ECT	3860	Digital Communication Networks I	3.00	3.00	Spring. Introduction to fundamental digital communication and networking concepts and practices within workstation-centered technologies. Concept topics include: data encapsulation and transmission, and network models. Practices include those necessary for the creation of local area networks, such as workstation configuration, and router/switch setup. Prerequisite: consent of instructor. Extra fee.
ECT	4410	Instrumentation	3.00	3.00	Fall. Industrial instrumentation, measuring thermal, mechanical, fluid and electric phenomenon. Transducers, signal conditioning, data acquisition, software development and sensor networks. Principles underlying their design and applications. One and one-half hours lecture and three hours laboratory. Prerequisites: ECT 2410 and CS 2010 or consent of instructor. Extra fee.
ECT	4450	Wireless Communication Systems	3.00	3.00	Fall. A study of the concepts of transmission, radiation and reception of electromagnetic energy in communication systems, with focus on wireless communication systems. One and one-half hours lecture and three hours laboratory. Prerequisite: ECT 3440. Extra fee.

ECT	4530	Digital Computer for Process Control	3.00	3.00	Spring. Basic concepts, terminology, evaluation and types of control systems as they apply to industrial process control and positioning systems. These systems will be subdivided into measurement, controllers, fieldbus networks and final control elements. One and one-half hours lecture and three hours laboratory. Prerequisites: ECT 2490 or CS 2170, CS 2010, MATH 1310 or equivalent. Extra fee.
ECT	4800	Topics in Electronics and Computer Technology	1.00	3.00	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 ECT faculty advisor.
ECT	4860	Digital Communication Networks II	3.00	3.00	Fall. Digital communication and networking concepts and practices with emphasis on wide area network (WAN) topologies. Concepts topics include: WAN hardware and WAN management. Practices include those necessary for the creation of WANs, such as router and server configuration. One and one-half hours lecture and three hours laboratory. Prerequisite: ECT 3860. Extra fee.
ECT	4900	Problems in Electronics and Computer Technology	1.00	3.00	For advanced students wanting to conduct intensive study of selected problems in electronics and computer technology. May be repeated. Prerequisite: consent of college. Graded S/U.

Subject: Education Administration & Supervision					
	Number	Long Course Title	Min Units	Max Units	Long Description

EDAS	4090	Organization and Administration of Education in American Society	3.00	3.00	Fall, Spring, Summer. Local, state and federal involvement in American education, current educational and legal issues, organization of schools, school finance, job placement, professional responsibilities of teachers. Prerequisite: EDFI 3020/EDFI 3030. C/F hours: 20.
EDAS	4900	Problems in Education	1.00	3.00	For advanced student wanting to conduct intensive study of selected problems in education. May be repeated to six hours; undergraduate credit only. Prerequisite: consent of department.

Subject: Educational Foundations & Inquiry					
	Number	Long Course Title	Min Units	Max Units	Long Description

EDFI	2020	Introduction to Teaching	3.00	3.00	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	1.00	1.00	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	3.00	3.00	Fall, Spring, Summer. Theory and research on the development of cognition, learning, and motivation, as applied to educational processes in various learning environments with a concentration on early childhood. 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	3.00	3.00	Fall, Spring, Summer. Theory and research on learning, development, personality and motivation applied to educational processes in various learning environments. Some field or clinical work. Prerequisites: PSYC 1010 and sophomore status. C/F hrs.: 20.
EDFI	3030	Educational Psychology Applied to Adolescent Development	3.00	3.00	Fall, Spring. Theory and research on socioemotional development, cognition, learning, and motivation, as applied to educational processes in various learning environments with a concentration on the adolescent years. Co-requisite field experience: EDFI 4200 recommended. Prerequisites: PSYC 1010 and sophomore status.

EDFI	3950	Workshop on Current Topics	1.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	2.00	2.00	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	1.00	2.00	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	2.00	2.00	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	3.00	3.00	In-depth study of selected topics, offered on demand. May be repeated once if subject matter is different.
EDFI	4820	Direct Study of the Child	1.00	5.00	Part of behavior analysis program. A child studied using predetermined framework.
EDFI	4900	Problems in Education	1.00	3.00	For advanced student wanting to conduct intensive study of selected problems in education. May be repeated to 6 hours; undergraduate credit only. Prerequisite: permission of instructor.

Subject: Education & Human Development	Number	Long Course Title	Min Units	Max Units	Long Description
EDHD	1000	Service Learning	1.00	1.00	Service learning links community service with academic study. Students learn through active participation in thoughtfully organized service. May be repeated. Graded S/U.
EDHD	2000	Service Learning	1.00	1.00	Service learning links community service with academic study. Students learn through active participation in thoughtfully organized service. May be repeated. Graded S/U.
EDHD	2010	Introduction to Education	2.00	2.00	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.
EDHD	3000	Service Learning	1.00	1.00	Service learning links community service with academic study. Students learn through active participation in thoughtfully organized service. May be repeated. Graded S/U.
EDHD	4000	Service Learning	1.00	1.00	Service learning links community service with academic study. Students learn through active participation in thoughtfully organized service. May be repeated. Graded S/U.
Subject: Educational Intervention Services	Number	Long Course Title	Min Units	Max Units	Long Description

EDIS	2310	Teaching Students with Exceptionalities	3.00	3.00	Fall, Spring, Summer. The nature and characteristics of students with exceptionalities, legal issues in special education, issues in definitions and identification of exceptionalities and ways to adapt learning environments, including methods, materials, classroom arrangement, etc. to meet the needs of all students. Prerequisites: EDHD 2010. C/F hrs.: 15. IS majors must take for a letter grade.
EDIS	3100	Second Year Field Experience	3.00	3.00	Introduction to breadth and depth of the field of special education, professional and consumer organizations, professional opportunities. Spend extended time with persons with special needs in different settings. Prerequisites: EDHD 2010; C/F hrs. 60. Graded S/U.
EDIS	3240	American Sign Language I	3.00	3.00	Basic vocabulary and grammatical structure of the visual language system used by deaf persons in North America. Implications of deafness for language and communication, psycholinguistic studies of Sign. Registration priority given to majors in Mild/Moderate, Moderate/Intensive, Deaf/Hard of Hearing, Developmental Disabilities and Habilitation, Adapted Physical Education, Communication Disorders. Non-majors will be added through wait lists as space allows.
EDIS	3250	American Sign Language II	3.00	3.00	Students will expand conversational range including situations such as giving directions, making requests, establishing connections with Deaf persons, handling interruptions during conversations. Students will learn historical aspects of Deaf education and Deaf organizations. Prerequisites: EDIS 3240 or consent of instructor. Registration priority given to majors in Mild/Moderate, Moderate/Intensive, Deaf/Hard of Hearing, Developmental Disabilities and Habilitation, Communication Disorders. Non-majors will be added through wait lists as space allows.
EDIS	3260	American Sign Language III	3.00	3.00	This course is to foster and increase competence of American Sign Language (ASL) emphasizing advanced ASL structures in dialogue, narrative, and conversational formats encouraging students to establish and maintain social relationships with Deaf people. This is a continuation of ASL II, expanding the emphasis on ASL grammar, syntax, spatial referencing, and vocabulary development. Prerequisite: EDIS 3250 or consent of instructor.

EDIS	3270	American Sign Language IV	3.00	3.00	This course is to advance competence of ASL understanding. Students will develop comprehension in context of medium-length stories, narratives, and dialogues. This further encourages ASL skills in order for students to establish and maintain social relationships with deaf people. This course is a continuation of ASL III. It includes discussion of culturally significant topics related to the deaf community, more complex ASL grammatical features, and vocabulary building. Prerequisite: EDIS 3260 or consent of instructor.
EDIS	3950	Workshop on Current Topics	1.00	3.00	Intensive educational experience on selected topics related to skill development, content update, materials development. Typically, an all-day concentrated time format used. Requirements usually met within format. May be repeated on approval of adviser. Graded.
EDIS	4100	Third Year Field Experience	3.00	3.00	Fall, Spring. Maintaining healthy environments and using technology and classroom resources. Experience in special education classrooms. Prerequisites: EDIS 2310, and EDFI 3020 or EDFI 3030. C/F hrs.: 100. S/U.
EDIS	4110	Phonics Instruction for Students with Special Needs	3.00	3.00	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	3.00	3.00	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	3.00	3.00	Technology across special education spectrum. Content ranges from use of computers and various input and output devices 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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	Fall, Spring. Etiology, characteristics, classifications, and implications of common disabilities in young children. Also includes multi-factored evaluation, eligibility for special education services, service delivery models, and individualized education/intervention plans. Prerequisite: HDFS 2210.
EDIS	4360	Introduction to Education of Students who are Deaf/Hard of Hearing	3.00	3.00	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	3.00	3.00	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 EDTL 3000), EDIS 4120, concurrent enrollment in EDIS 4410 and EDIS 4420. C/F hrs.: 125. S/U.
EDIS	4410	Reading and Writing Instruction for Students with Special Needs	3.00	3.00	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	3.00	3.00	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 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	3.00	3.00	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 Intervention Specialists; GPA of 2.75 or better or department permission. Graded.
EDIS	4450	Math, Social Studies, and Science Instruction for Students with Special Needs	3.00	3.00	Fall, Spring. Methods and materials for math, social studies and science instruction. Prerequisites: Senior status, taken as part of Methods Block for Mild-Moderate, Moderate-Intensive or Deaf/Hard of Hearing Intervention Specialist, GPA of 2.75 or better or department permission. Extra fee.
EDIS	4460	Physical and Medical Management	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	4.00	4.00	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	3.00	3.00	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	4670	Educational Audiology and Aural Rehabilitation for Students who are Deaf and Hard of Hearing	4.00	4.00	Fall. Basic anatomy and physiology of the hearing mechanism. Types, causes, etc. of hearing loss. Basic audiometric principles, interpretation of audiograms. Design, operation of various amplification equipment: classroom implication for use, care. Strategies for stimulation, use of residual hearing and integrating auditory skills with speech language instruction. Prerequisite: EDIS 4360.

EDIS	4700	Practicum with Students who are Deaf and Hard of Hearing	3.00	3.00	Fall. Observation of educational programs for students who are deaf and hard of hearing. Experience in tutoring, utilizing amplification and instructional media and developing/interpreting IEPs. Must be taken concurrently with EDIS 4640, EDIS 4650, EDIS 4660, EDIS 4670. Prerequisites: EDIS 2310, EDIS 4360.
EDIS	4820	Practicum in Residential Settings	3.00	3.00	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	8.00	16.00	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	3.00	3.00	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	1.00	3.00	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	1.00	16.00	The internship will feature 16 weeks in one or two classes for students with special needs. Interns will be expected to successfully put into practice the knowledge and skills they have been learning and practicing in previous classes and field experiences with the guidance of a mentor teacher and a university supervisor. Prerequisite: EDIS 4400, EDIS 4410, EDIS 4420. C/F hrs: 300. Extra fee.

Subject: Educational Teaching & Learning	Number	Long Course Title	Min Units	Max Units	Long Description
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EDTL	2020	Contemporary Perspectives on Teaching in the Middle Grades	2.00	2.00	This course will provide the students with their first specific introduction to middle childhood philosophy with a focus on urban education. This two-credit course will include a field experience in classrooms utilizing middle school philosophy. (2) Prerequisite: EDHD 2010. C/F Hrs.: 20. MCE. Extra fee. Transportation required.
EDTL	2040	Foundations of Early Childhood Education	3.00	3.00	Fall, Spring. This course is an introduction to early childhood education emphasizing the teaching of young children in schools with diverse populations. The course explores historical, social and philosophical foundations of early childhood education. Field-based course. Transportation required. Prerequisite: EDHD 2010 with letter grade of C or better. Pre-early childhood majors only. C/F hours: 21.
EDTL	2290	Introduction to the Teaching and Learning of Foreign Languages	3.00	3.00	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	2.00	2.00	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	3.00	3.00	Fall, Spring. An introductory course in understanding reading and writing processes, cultural and linguistic diversity, and the integration of the six language arts. Prerequisite: EDHD 2010.
EDTL	2710	Introduction to the Teaching of the Integrated Language Arts (ILA)	3.00	3.00	This course provides students with an introduction to teaching secondary (grades 7-12) English Language Arts. It focuses on understanding the integrated structure of the English Language Arts. Key concepts include: organizational structure, curriculum standards, inquiry, and technology. This course includes classroom observations in a field site. Prerequisite: EDHD 2010. Transportation required.

EDTL	2740	Introduction to Secondary Mathematics	3.00	3.00	Review of content typically taught in the secondary mathematics curriculum, including topics from algebra, geometry, trigonometry, statistics/probability, and discrete mathematics. An introduction to state and national Standards in mathematics, including mathematical process skills, inquiry through the use of hands on materials, and current instructional technology. Includes observations at a field site. Prerequisites: EDHD 2010, "C" or higher in MATH 1310 and at least 30 completed semester hours. Transportation required.
EDTL	2750	Introduction to the Teaching of Science	3.00	3.00	This course provides students with an introduction to the middle school, junior high school, and high school organizational and curricular issues in the specific discipline. It focuses on understanding the interrelated nature of the sciences as well as individual science courses. Key concepts in science education will be addressed such as organizational structure, curriculum standards, inquiry, and science/technology. This course will include observations in classrooms. Prerequisite: EDHD 2010. Transportation required.
EDTL	2760	Introduction to the Teaching of Social Studies	3.00	3.00	This course provides students with an introduction to curricular issues across all grade levels in the specific discipline. It focuses on understanding the interrelated nature of the social sciences as well as individual social science courses. Key concepts in social studies education will be addressed such as organizational structure, curriculum standards, inquiry, and social science/technology. This course will include observations in classroom settings. Prerequisite: EDHD 2010. Transportation required.
EDTL	3010	Phonics, Fluency, and Word Study	3.00	3.00	Phonics and a systematic approach to its teaching, assessment, and intervention with middle grade learners. From a base of language development, the course examines phonics, structural analysis, and other word recognition strategies as tools for reading fluency. Word study and spelling across the curriculum are addressed. Prerequisite: EDFI 3030. (Credit not given for more than one of EDTL 300, EDTL 3010, and EDTL 3110.)

EDTL	3020	Computer Utilization for the Middle Childhood Teacher	3.00	3.00	Fall, 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; EDFI 3020 or EDFI 3030 and Junior standing. Prerequisite or corequisite: EDTL 3400. Credit not given for more than one of EDTL 3020, EDTL 3030, or EDTL 4670. Extra fee.
EDTL	3030	Computer Utilization for the Early Childhood Teacher	3.00	3.00	Fall, 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	3100	Literacy for Young Learners	3.00	3.00	Fall, Spring. This course examines literacy development from pre-kindergarten through the primary grades. From theoretical perspectives to developmentally appropriate materials, instructional approaches and strategies for teaching all young learners are explored. Must be taken as part of Field Block I. Transportation required. Prerequisite: admission to early childhood education program. Extra fee.
EDTL	3110	Phonics, Word Recognition, and Language Skills for Young Children	3.00	3.00	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.

EDTL	3200	Kindergarten-Grade 3 Practicum	3.00	3.00	Fall, Spring. This course examines planning, teaching, management, and professionalism for early childhood education. The course includes an intensive field experience in a kindergarten or primary grade classroom. Must be taken as part of ECE Field Block II. Transportation required. Prerequisite: Letter grades of C or better in all Field Block I courses (HDFS 3200, HDFS 4200, EDIS 4290, EDTL 3100, and EDTL 3110). Graded S/U. Extra fee.
EDTL	3220	Literacy Across the Early Childhood Curriculum	3.00	3.00	Fall, Spring. This course examines developing oral and written language abilities in young children through age-appropriate, integrated curriculum. Approaches, teaching strategies, and resources for language learning through reading, writing, speaking, listening, viewing and visual representation are covered. Must be taken as part of ECE Field Block II. Transportation required. Prerequisite: Letter grades of C or better in all Field Block I courses (HDFS 3200, HDFS 4200, EDIS 4290, EDTL 3100, and EDTL 3110). Extra fee.
EDTL	3230	Early Childhood Mathematics Methods	3.00	3.00	Fall, Spring. This course explores teaching contemporary mathematics in pre-kindergarten-grade 3. Objectives, curriculum, materials for instruction, methods of teaching, and assessment are discussed. Must be taken as part of ECE Field Block II. Transportation required. Prerequisite: Letter grades of C or better in all Field Block I courses (HDFS 3200, HDFS 4200, EDIS 4290, EDTL 3100, and EDTL 3110). Extra fee.
EDTL	3240	Science Methods for the Early Childhood Teacher	3.00	3.00	Fall and Spring. Concepts of teaching science in grades pre-k-grade 3 are covered in this course. Developmentally appropriate instruction in science, including early childhood science curriculum, materials, adapting curriculum for diverse populations, inquiry based pedagogy, science safety, and Ohio's Academic Content Standards for Science, and multiple methods evaluation are examined. Must be taken as part of ECE Field Block II. Transportation required. Prerequisite: Letter grade of C or better in all Field Block I courses (HDFS 3200, HDFS 4200, EDIS 4290, EDTL 3100, and EDTL 3110). Extra fee.

EDTL	3250	Social Studies Methods for the Early Childhood Teacher	3.00	3.00	Fall, Spring. This course explores objectives, content learning experiences, instructional resources, cooperative learning, reflective teaching and learning for all children in pre-kindergarten to grade 3 classrooms. Must be taken as part of ECE Field Block II. Transportation required. Prerequisite: Letter grades of C or better in all Field Block I courses (HDFS 3200, HDFS 4200, EDIS 4290, EDTL 3100, and EDTL 3110). Extra fee.
EDTL	3260	Literacy Assessment in the Early Childhood Education Classroom	3.00	3.00	Fall, Spring. This course is an investigation of the role of classroom assessment in instructional decision-making and student learning. It provides an in-depth study of various formal and informal literacy assessment tools that are appropriate to use in early childhood classrooms. Must be taken as part of ECE Field Block II. Transportation required. Prerequisite: Letter grades of C or better in all Field Block I courses (HDFS 3200, HDFS 4200, EDIS 4290, EDTL 3100, and EDTL 3110).
EDTL	3400	Teaching for the Middle Grades	3.00	3.00	Fall, Spring. Planning, teaching, management, and professionalism for middle grade teachers. Prerequisites: Admission to Middle Childhood Program; 2.8 GPA. Prerequisite or corequisite: EDTL 3020. Must obtain a minimum grade of C prior to EDTL 4920. Extra fee.
EDTL	3410	Content Literacy for Middle Childhood Educators	3.00	3.00	Teaching literacy across the curriculum, grades 4-9. Evaluating texts, student reading ability, and comprehension. Integrating reading with writing to learn. Instruction, intervention, and assessment strategies. Prerequisite: C grade or better in EDTL 3010 and EDTL 2420. Must obtain a minimum grade of C prior to EDTL 4920. Extra fee.
EDTL	3430	Applied Literacy Assessment for the Middle Childhood Classroom	3.00	3.00	Fall, Spring. Applying literacy techniques to middle childhood classrooms and educational settings. From theoretical perspectives to materials, techniques, and tools. Using assessments to plan instruction. Transportation required. Must obtain a minimum grade of C prior to EDTL 4920. Prerequisite or Corequisite: EDTL 3410.
EDTL	3450	Mathematics Instruction for the Middle Childhood Educator	3.00	3.00	Fall, Spring. Teaching contemporary mathematics in grades 4-9. Objectives, curriculum, materials for instruction, methods of teaching, and assessment. Must complete prior to EDTL 3460 and EDTL 4920.

EDTL	3460	Investigations in Mathematics for the Middle Childhood Teacher	3.00	3.00	Fall, Spring. Research in mathematics education for the middle grades. Curricular and instructional trends, national and state models, team teaching, use of technology. Must obtain minimum grade of C prior to EDTL 4920. Transportation required. Prerequisites: "C" or better in MATH 4150 and EDTL 3450; admission to middle childhood program. C/F hrs.: 30. Extra fee.
EDTL	3470	Literacy for Middle Childhood Educators	3.00	3.00	Fall, Spring. 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	3480	Science Methods for the Middle Childhood Teacher	3.00	3.00	Fall, Spring. Teaching science in grades 4-9. Objectives, curriculum, materials, evaluation, and instruction, including teaming and adaptations for diverse learners. Methods Block Practicum. Must obtain a minimum grade of C prior to EDTL 4920. Transportation required. Prerequisite: admission to middle childhood program. Extra fee.
EDTL	3490	Social Studies for the Middle Childhood Teacher	3.00	3.00	Fall, Spring. Objectives, content learning experiences, instructional resources, teaming, evaluation of teaching, learning in the classroom. Methods Block Practicum. Must obtain a minimum grade of C prior to EDTL 4920. Prerequisite: admission to middle childhood program. Transportation required. Extra fee.
EDTL	3510	Social Studies Methods for the Intermediate Grades	3.00	3.00	This course is designed to prepare educators for teaching social studies and meeting the needs of children in the intermediate grades. The course is structured around the following concepts: (1) learning and teaching social studies objectives; (2) intermediate grade content identified in the Ohio Academic Content Standards; (3) diversity; (4) teaching and learning experiences; (5) instructional resources; and (6) evaluating teaching and learning in the social studies classroom. Prerequisites: Teacher licensure or department approval. Register in department.

EDTL	3700	General Teaching Methods in Secondary Schools	3.00	3.00	Processes and issues that form the basis of instruction in all content areas; development of strategies and teacher behaviors associated with effective instruction. Prerequisites: attainment of 60 semester hours; accumulative GPA of at least 2.8; grade of C or better in IPC 1020, GSW 1120, EDHD 2010, EDFI 3020 or EDFI 3030; and either EDTL 2290, EDTL 2710, EDTL 2740, EDTL 2750, or EDTL 2760. Transportation required. Extra fee.
EDTL	3950	Workshop on Current Topics	1.00	9.00	Intensive education experience on selected topics related to skill development, content update or materials development. Typically, an all-day or similar concentrated time format. Requirements usually completed within time format. May enroll up to 9 hours. May be repeated with different titles. Requires consent of program coordinator. S/U only.
EDTL	4180	Practicum in School Settings	3.00	3.00	Fall, Spring. Seminars and field experiences are designed to develop the knowledge, skills, and dispositions necessary for successful teaching. Focal areas include professionalism, effective teaching practices, classroom management, and professional development. Prerequisite: Admission into the Adolescent/Young Adult Methods Block, Foreign Language Methods Block, or Middle Childhood Methods Block. S/U only. Transportation required.
EDTL	4200	Developmental Reading in the Content Areas	3.00	3.00	Fall, Spring. Orients the teacher to the developmental reading process as it applies to the various subject matter areas. Prerequisite: admission into the adolescent/young adult education methods block, or foreign language education methods block. No credit for EDTL 4200 if credit has already been earned for EDTL 4210 or EDTL 3410. Transportation required.
EDTL	4210	Content Area Literacy	3.00	3.00	Fall, Spring. Orients 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	3.00	3.00	Fall. Advanced-level skills and abilities in teaching listening, speaking, reading and writing in foreign languages as applied to the K-12 curriculum, classroom management, testing and evaluation, individualized instruction and culture. If taken for graduate credit, a research paper is required. Prerequisites: EDTL 2290 and EDHD 2010. C/F hrs.: 40. Transportation required.
EDTL	4500	Teaching Ohio and the Americas: Content and Methods for the Intermediate Social Studies Classroom	3.00	3.00	Summer. An in-depth study of social studies instruction 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 Learning.
EDTL	4501	Upper Elementary Math Instruction	3.00	3.00	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 Learning.
EDTL	4502	Upper Elementary Science Instruction	3.00	3.00	Summer. A systematic 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. 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 Learning.
EDTL	4503	Upper Elementary Language Arts Instruction	3.00	3.00	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 Learning.

EDTL	4670	Computer Utilization in the Classroom	3.00	3.00	Fall, Spring. Impact of the computer on educational methods and applications in the classroom. Evaluation of software. Integration of the computer and associated technologies into the content areas. Prerequisites: EDTL 2300 and admission to Adolescent/Young Adult Education methods block or Foreign Language Education methods block. Grade of "C" or better required. Transportation required. Extra fee.
EDTL	4710	Language Arts in Secondary Schools	3.00	3.00	Fall, Spring. Philosophies of, experiences in and methods of teaching English in secondary schools. Prerequisites: admission into the adolescent/young adult methods block. ENG 3800 and ENG 3810. Grade of C or better required. C/F hours: 40. Transportation required. Extra fee.
EDTL	4740	Mathematics in Secondary Schools	3.00	3.00	Fall, Spring. Principles, objectives, curriculum, materials and methods of teaching mathematics in secondary schools. Prerequisite: admission into the adolescent/young adult education methods block. Grade of C or better required. C/F hrs.: 40. Transportation required. Extra fee.
EDTL	4750	Science in Secondary Schools	3.00	3.00	Fall, Spring. Principles, objectives, curriculum, instructional and resource materials, and methods of teaching science in secondary schools. Prerequisite: admission into the adolescent/young adult education methods block. Grade of C or better required. C/F hrs.: 40. Transportation required. Extra fee.
EDTL	4760	Social Studies in Secondary Schools	3.00	3.00	Fall, Spring. Principles, objectives, curriculum, instructional and resource materials, and methods of teaching social studies in secondary schools. Prerequisite: admission into the adolescent/young adult education methods block. Grade of C or better required. C/F hrs.: 40. Transportation required. Extra fee.

EDTL	4800	Professional Skills for the Early Childhood Educator	3.00	3.00	Fall, Spring. This is a professional course to support reflectivity and develop the emerging skills of student teachers. Included topics are classroom decision-making, collaboration, and advocacy within the framework of legal and organizational perspectives. Students participate in health and safety sessions on child abuse, communicable diseases, first aid, and CPR. Must be taken with EDTL 4910 (14 hrs.) or both EDTL 4910 (7 hrs.) and HDFS 4910 (7 hrs.). Prerequisite: Completion of Field Block I and II with a C or better in graded coursework and an S in S/U coursework. Graded S/U. Transportation required.
EDTL	4810	Advanced Seminar in the Teaching of Integrated Language Arts	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	1.00	3.00	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	1.00	16.00	Fall, Spring. Classroom teaching in kindergarten or primary grades under supervision on full-day basis. Student follows calendar and hours of assigned school. College/program eligibility requirements must be met. Transportation required. C/F hours: 40 hours per week. May be repeated. Graded S/U. Extra fee. Co-requisite: EDTL 4800.
EDTL	4920	Middle Childhood Teaching Internship	1.00	16.00	Fall, Spring. Classroom teaching in middle grades under supervision on full-day basis. Student follows calendar and hours of assigned school. College/program eligibility requirements must be met. Transportation required. C/F hours: 40 hours per week. May be repeated. Graded S/U. Extra fee. Co-requisite: EDTL 4930.
EDTL	4930	Student Teaching Seminar for Middle Childhood Educators	3.00	3.00	Fall, Spring. A forum for discussing and reflecting on the student teaching internship. Topics include advanced lesson planning and instruction; effect on student learning; classroom management; Praxis III preparation; and transitioning to a professional career. Corequisite: EDTL 4920. Transportation required.
EDTL	4970	Teaching Internship	1.00	16.00	Fall, Spring. Classroom teaching in foreign language or secondary school settings under supervision on full-day basis. Student follows calendar and hours of assigned school. College/program eligibility requirements must be met. Transportation required. C/F hours: 40 hours per week. May be repeated. Graded S/U. Extra fee. Co-requisite: EDTL 4810, 4840, 4850, 4860, or 4890.

Subject: English	Number	Long Course Title	Min Units	Max Units	Long Description
ENG	99	Creative Writing Common Time	0.00	0.00	Fall, Spring. Restricted to, and required of, all creative writing majors and minors. Successful completion of course requires attendance at scheduled one-hour common time each week. Must complete four semesters. No prerequisites. Graded S/U.
ENG	1000	ESL Academic Composition I	3.00	3.00	Fall or Spring. Develops intermediate skills in writing academic American English. Emphasis is on sentence-level and paragraph-level writing leading to short essays. Placement is on the basis of proficiency examination. If placed into English 1000, this course is a prerequisite to English 1010 and to GSW courses.

ENG	1010	ESL Academic Composition II	3.00	3.00	Fall or Spring. Develops high-intermediate skills in writing academic American English. Emphasis is on essay-level writing. Placement is on the basis of proficiency examination or successful completion of ENG 1000. If placed into English 1010, this course is a prerequisite to GSW courses.
ENG	1030	ESL Academic Oral/Aural Communication Skills I	3.00	3.00	Students placed in this class focus on pronunciation: individual consonants and vowels, word and sentence stress, intonation, and rhythm. Focus is also placed on building vocabulary, developing presentation skills, and building overall fluency. Some emphasis is placed on strategies for comprehending both formal and informal English and on note-taking. This course may be helpful for World English speakers who are fluent speakers of English, but whose accents significantly impede comprehension. 70% of class time focuses on pronunciation; 30% on fluency practice. Graded S/NC.
ENG	1040	ESL Academic Oral/Aural Communication Skills II	3.00	3.00	Students placed in this class still need some work on pronunciation (consonants and vowels, word and sentence stress, intonation, rhythm), but more focus is on overall fluency and the ability to give effective oral presentations and lead group discussions. Focus is also placed on listening to academic lectures and on a developed ability to take notes. World English speakers who have a somewhat impeding accent and who could work on presentation skills may find this class the most useful. 70% of class time focuses on fluency practice; 30% on pronunciation. Graded S/NC.
ENG	1500	Response to Literature	3.00	3.00	Fall, Spring. A general education course emphasizing discussion of humanistic themes based on student responses to readings in fiction, drama, poetry and nonfiction. Not accepted toward English major or minor. Prerequisite: enrollment in or completion of GSW 1110. Applicable to the BG Perspective (general education) humanities and arts requirement.
ENG	2000	Writing about Literature	2.00	3.00	Fall, Spring. Various topics: Short Story, Literature and Film, Women in Literature, Literature of the Natural World. A general education course with emphasis on humanistic themes, basic literary concepts, and writing. Some topics for two hours, most for three. Can be repeated once if topics differ. Not accepted for English major or minor. Applicable to the BG Perspective (general education) humanities and arts requirement.

ENG	2010	Introduction to Literature	3.00	3.00	Fall, Spring, Summer. Various thematic topics. Introduction to literary and textual study with attention to various forms of fiction, nonfiction, drama, poetry, and to essential literary terminology and practice. Extensive expository writing. Prerequisite for most 3000- and 4000-level ENG courses. Applicable to the BG Perspective (general education) humanities and arts requirement.
ENG	2040	Imaginative Writing	3.00	3.00	Fall, Spring. Exploration of the creative process through reading and practice in various genres of imaginative writing, such as poetry, fiction, and drama, but not limited to these. Emphasis on the means by which students find artistic form for expression. Open to all students. Extra fee.
ENG	2050	Craft of Poetry	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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. Extra fee.
ENG	2090	Creative Writing Workshop	3.00	3.00	Fall, Spring. Principles of poetic composition and fiction writing; analysis of contemporary models and group discussion of student's work. May be repeated once. Extra fee.
ENG	2110	African-American Literature	3.00	3.00	Spring. African-American literature from the mid-eighteenth century to the present in its historical, political, and cultural context. Germane critical approaches to both literary modes and vernacular tradition. Applicable to the BG Perspective (general education) cultural diversity in the United States requirement.
ENG	2120	Native American Literature	3.00	3.00	Fall. Native American literature from the oral to the written tradition in its historical and cultural context. Germane critical approaches to the tales, songs, myths, memoirs, poetry and fiction. Applicable to the BG Perspective (general education) cultural diversity in the United States requirement.

ENG	2610	World Literature from Ancient Times to 1700	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	Fall, Spring. Writing-intensive course treating film analysis, film reviews, film theory, and film adaptations. Prerequisite: GSW 1120. Extra fee.
ENG	2900	Language Study	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	Fall, Spring, Summer. The Bible as a literary classic; its development and influence on literary culture. Prerequisite: GSW 1120.
ENG	3100	Multiethnic American Literature	3.00	3.00	Alternates with ENG 3110 and ENG 3140 in Fall, Spring, Summer. Modern and contemporary literatures by visibly ethnic American writers. Themes, literary genres, and germane critical approaches in a focus on intersections between cultures and texts. Prerequisites: ENG 3020 or ENG 2020.

ENG	3110	Gay and Lesbian Literature and Criticism	3.00	3.00	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	3.00	3.00	Fall, Spring. Practical application of students' knowledge of how poems are put together. Class discussion and analysis of original and published poetry, and poetry exercises. Required for creative writing major. Prerequisites: ENG 2040, ENG 2050, ENG 2060, a B or better in ENG 2090 and approval of portfolio by the Creative Writing Program; or permission of instructor. May be repeated once. Extra fee.
ENG	3130	Fiction Workshop	3.00	3.00	Fall, Spring. Practical application of students' knowledge of how stories are put together. Class discussion and analysis of original and published stories, and fiction exercises. Required for creative writing major. Prerequisites: ENG 2040, ENG 2050, ENG 2060, and a B or better in ENG 2090 and approval of portfolio by the Creative Writing Program; or permission of instructor. May be repeated once. Extra fee.
ENG	3140	Postcolonial Literature	3.00	3.00	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	3.00	3.00	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	3.00	3.00	Fall. Novelistic fiction from English, European (in translation), and American writers of the Modern period such as Flaubert, Joyce, Conrad, Woolf, Kafka, Mann, Faulkner. Focus on development of forms of fiction, styles, and narrative theories, and on cultural, literary, and political contexts of individual works. Prerequisites: any ENG literature course and GSW 1120.

ENG	3250	Modern Drama	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	Fall, Spring. Reading and evaluation of books for 4th-9th grade; fiction, nonfiction, poetry, picture books, and bibliographic resources. Prerequisite: GSW 1120. Priority given to Middle Childhood and EDIS majors. Not applicable to the College of Arts & Sciences literature requirement in Group V: Arts & Humanities.

ENG	3450	Literature for Adolescents	3.00	3.00	Fall, Spring. Reading and evaluation of books for 7th - 12th grade; fiction, non-fiction, poetry, and bibliographic sources. Prerequisite: GSW 1120. Priority given to ILA and EDIS majors. Does not count for Arts and Humanities literature requirement.
ENG	3800	Linguistics for English Teachers	3.00	3.00	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	3.00	3.00	Fall, Spring. Application of grammatical models (traditional, structural and transformational) to the teaching of writing.
ENG	3850	Studies in Literature-Film	3.00	3.00	On demand. Problems in film's relationship to literature; definitions and theory; specific films and literary works. May focus on author, genre or historical period. May be repeated once if topics differ. Prerequisite: GSW 1120. Extra fee.
ENG	3870	Literary Editing and Publishing	3.00	3.00	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	3.00	3.00	Fall, Spring. Application of basic forms of writing for business, industry, and government. Requires writing and revising a number of documents including instructions, definitions, descriptions, and reports. Prerequisite: junior standing. Extra fee.
ENG	3890	Professional Editing	3.00	3.00	Fall, Spring. Editing technical, scientific, and other professional documents such as proposals, reports, journal articles, conference proceedings, and books. Includes introduction to managing editorial services. Prerequisites: junior standing or permission of instructor. Extra fee.
ENG	4000	Chaucer	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	On demand. Renaissance dramatic forms and traditions exclusive of Shakespeare. May include representative authors (Marlowe, Jonson, Middleton, Webster) or genres (revenge tragedy, city comedy, domestic tragedy). Prerequisite: ENG 2010.
ENG	4080	Milton	3.00	3.00	On demand. Paradise Lost, Paradise Regained, Samson Agonistes, and selected minor poems and prose. Prerequisite: ENG 2010.
ENG	4100	Topics in English Restoration Literature and Culture	3.00	3.00	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	3.00	3.00	Fall, Spring. Focuses on developing the students' writing process and understanding of contemporary poetry. Prerequisite: B or better in ENG 3120 or ENG 3130 or instructor permission. May be repeated once. Extra fee.
ENG	4130	Fiction Writer's Workshop	3.00	3.00	Fall, Spring. Focuses on developing the students' writing process and understanding of contemporary fiction. Prerequisite: B or better in ENG 3130 or ENG 3120 or instructor permission. May be repeated once. Extra fee.

ENG	4150	Topics in 18th-Century British Literature and Culture	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	On demand. Works in one or more genres from the modern period by English, Irish, Scottish, and Welsh writers such as Joyce, Yeats, Thomas, Woolf, and O'Casey. Topics may include theoretical, aesthetic, historical, cultural, and political issues of the period. Prerequisite: ENG 2010.
ENG	4200	Topics in Contemporary British Literature	3.00	3.00	On demand. Works in one or more genres from the 1940s to the present by English, Irish, Scottish, Welsh, and immigrant writers of the British Isles. Topics may include theoretical, aesthetic, historical, cultural, and political issues of the period. Prerequisite: ENG 2010.

ENG	4230	Women's Studies in Literature	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	On demand. Intensive study of an author, group of authors, genre, theme, period, or critical issue. Authors may include: Eliot, Stein, Hurston, Hemingway, Faulkner, Odets, Barnes, Wharton, Stevens, H.D., and Hughes. Prerequisite: ENG 2010.
ENG	4340	Topics in Contemporary American Literature	3.00	3.00	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	3.00	3.00	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	3.00	3.00	On demand. In-depth study of one or more literary/critical theories such as semiotic, psychoanalytic, Marxist, feminist, postcolonial. Prerequisite: ENG 3020 or ENG 2020.

ENG	4700	Directed Readings in Language and Literature	1.00	4.00	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	3.00	3.00	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	3.00	3.00	Fall, Summer. Writing intensive course intended for students who want to develop their writing skills at an advanced level. Focus and subject matter will vary but rhetorical emphasis will guide the writing tasks and approaches. Prerequisite: Writing intensive course at the 2000 level or above in any department. Extra fee.
ENG	4840	Foundations of Teaching Writing	3.00	3.00	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	3.00	3.00	On demand. In-depth study of one or more film theories such as semiotic, psychoanalytic, genre, feminist. Prerequisite: ENG 2010. Extra fee.
ENG	4860	Writing Process for Online Documents	3.00	3.00	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	3.00	3.00	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	3.00	3.00	Advanced study of theory and research in documentation. Student produces a substantial portfolio-quality project. Prerequisite: ENG 3880 or permission of instructor. Extra fee.

ENG	4890	Internships in English Studies	1.00	9.00	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	1.00	3.00	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	3.00	3.00	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	3.00	3.00	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 Thesis Workshop	3.00	3.00	Fall, Spring. Workshop on research techniques and writing designed to assist students to produce a scholarly essay of approximately 25 pages. Students enrolling in 4990 are responsible for having a topic by the first day of class. Credit may not be received for both ENG 4980 and ENG 4990. Prerequisite: 20 hours of English beyond GSW 1120, and permission of the instructor.

Subject: Engineering Technology	Number	Long Course Title	Min Units	Max Units	Long Description
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ENGT	1010	Design and Engineering Graphics I	3.00	3.00	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.
ENGT	1020	Introduction to Engineering Technology	3.00	3.00	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	3.00	3.00	Fall, Spring. Introduction to CAD-based application. Construction of two-dimensional engineering drawings using a CAD system, with an emphasis upon geometric construction, orthographic projection, dimensioning, basic pictorials, and presentation. One two-hour lecture and one two-hour laboratory per week. Prerequisite: High School Drafting or equivalent, or permission of instructor.
ENGT	2100	Solid Modeling	3.00	3.00	Fall. Intermediate CAD course focusing on 3-D solid modeling and the conversion of these models into engineering detail drawings and assemblies. One two-hour lecture and one two-hour laboratory per week. Prerequisite: ENGT 1100 or permission of instructor. Extra fee.
ENGT	2150	Descriptive Geometry & Production Drawing	3.00	3.00	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	3.00	3.00	Spring and on demand. A survey of metals and their hot and cold processing practices. Laboratory applications and techniques are studied. One and one-half hour of lecture and one three-hour laboratory per week. Prerequisites: ENGT 1000 or MFG 1120, MATH 1120 or higher. Extra fee.

ENGT	2300	Fluid Power Transmission	3.00	3.00	Spring. Summer on demand. Pumps, motors, valves, circuits, applications of hydraulic and pneumatic power systems. Design, operation, maintenance of fluid power systems used in industry. Four hours of lecture and laboratory. Prerequisites: MATH 1120 or higher, ENGT 2200. Extra fee.
ENGT	2400	Statics and Strength of Materials	3.00	3.00	Fall, Spring. Fundamentals of statics including vectors, centroids, moment of inertia, free body diagrams and structural systems. Strength of materials including simple and combined stress, bending, shear and torsional stress. One two-hour lecture and one two-hour laboratory per week. Prerequisite: MATH 1280 or MATH 1300 or MATH 1310 or MATH 1340 and MATH 1350 or permission of instructor.
ENGT	2500	Computer Numerical Control (CNC) Programming and Machining	3.00	3.00	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	3000	Mechanical Design	3.00	3.00	Spring. Engineering graphics and CAD principles applied to the design of components, assemblies, machines, and production systems. Selection and application of standard mechanical components. One two-hour lecture and one two-hour laboratory per week. Prerequisites: ENGT 2150 and ENGT 2200. Extra fee.
ENGT	3050	Technical Illustration	3.00	3.00	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	3150	Three-Dimensional Parametric Modeling	3.00	3.00	Fall. Three-D Parametric Design techniques applied to part and assembly modeling and production drawings; including presentation design synthesis and rapid prototyping. One two-hour lecture and one two-hour laboratory per week. Prerequisite: ENGT 2150. Extra fee.

ENGT	3200	CAM & Rapid Prototyping	3.00	3.00	Spring, summer on demand. Contemporary manufacturing processes in which the process of producing a newly designed product is expedited on Computer Aided Design/Computer Aided Manufacturing (CAD/CAM). Prerequisites: ENGT 2100. Extra fee.
ENGT	3400	Properties and Testing of Engineering Materials	3.00	3.00	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	3.00	3.00	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	3.00	3.00	Focus on contemporary metrology instrumentation, practice with an emphasis on geometric dimensioning and tolerancing. Four hours of lecture and lab. Prerequisites: ENGT 2150, ENGT 2200. Extra fee.
ENGT	4000	Advanced Modeling, Simulation and Analysis	3.00	3.00	Fall. Study and application of computer modeling systems using interactive methodologies for modeling, simulation and presentation analysis. One two-hour lecture and one two-hour laboratory per week. Prerequisites: ENGT 3000 and ENGT 3150. Extra fee.
ENGT	4280	Automation and Flexible Manufacturing Systems	3.00	3.00	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	3.00	3.00	Fall and on demand. Systems approach applied to solution of product design problems; emphasis on feasibility of design solutions, manufacturability and consideration of assembly. One two-hour lecture and one two-hour laboratory per week. Prerequisite: ENGT 4000. Extra fee.

ENGT	4750	Professional Development	3.00	3.00	Spring. Capstone course for the Mechanical Design Concentration. Review of Design and Engineering principles. Preparation for the Fundamentals of Engineering Exam. Senior Synthesis Project. Prerequisites: ENGT 4000 and ENGT 4500.
ENGT	4800	Topics in Engineering Technology	1.00	3.00	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	1.00	5.00	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.

Subject: Environmental Health	Number	Long Course Title	Min Units	Max Units	Long Description
ENVH	1050	Environmental Health Science	3.00	3.00	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	3.00	3.00	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	3010	Public Health and Sanitation	3.00	3.00	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.
ENVH	3020	Industrial Hygiene	3.00	3.00	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	1.00	1.00	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	3.00	3.00	Principles of air quality; pollution sources, effects and control strategies. Three hours lecture. Prerequisite: CHEM 1250.
ENVH	3050	Air Quality Laboratory	1.00	1.00	Sampling and analysis methods in air quality control. three hours weekly. Corequisite: ENVH 3040. Major restricted or instructor's consent.
ENVH	3060	Environmental Regulation, Organization and Administration	3.00	3.00	Foundations of environmental law. Structure and function of federal, state, regional and local environmental agencies. Key environmental statutes. Environmental program administration.
ENVH	3070	Occupational Safety	3.00	3.00	Workplace safety principles including regulations, program development and program implementation. Approved for online delivery.
ENVH	3080	Industrial Ventilation	3.00	3.00	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	3.00	3.00	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	3.00	3.00	Advanced methods of assessing environmental problems. Includes information and data sources, experimental design, sampling and analytical techniques and theory, statistical methods and technical reporting. Prerequisite: ENVH 3090.
ENVH	4020	Principles of Water Quality	3.00	3.00	Properties of water and biological, chemical and physical pollutants. Relationship between use and quality. Management strategies. Three hours lecture. Prerequisites: CHEM 1270 and CHEM 1280.
ENVH	4030	Water Quality Laboratory	1.00	1.00	Laboratory practices in water quality. Three hours weekly. Corequisite: ENVH 4020. Major restricted or instructor's consent.
ENVH	4050	Hazardous Material Management	3.00	3.00	Principles of managing hazardous waste and material, disposal, treatment, emergency response and clean-up. Consideration of environmental toxicology and risk assessment.

ENVH	4070	Environmental Toxicology	3.00	3.00	Measurement, effects and mechanisms of toxicity on human health and the environment. Use of toxicology in environmental risk assessment and risk management. Prerequisite: CHEM 3060 or consent of instructor.
ENVH	4490	Epidemiology	3.00	3.00	Principles and methods of epidemiological investigation. Distribution and determinants of health and disease in humans. Three hours lecture. Prerequisite: Statistics course. Credit allowed for no more than one: ENVH 4490 and BIOL 4490.
ENVH	4700	Special Problems in Environmental Health	1.00	4.00	Student designs and carries out study or special project in area of interest. Prerequisite: consent of instructor. May be repeated.
ENVH	4910	Environmental Health Practicum	1.00	3.00	Experience working under supervision in selected environmental, public health or health planning agencies or industries with environmental health units; emphasis on practice rather than observation. Prerequisites: instructor's permission, at least junior status. May be repeated up to 4 hours. Graded S/U.
ENVH	4920	Comprehensive Environmental Health Practices	3.00	3.00	A capstone course for integrating environmental health principles into practical application. Dissemination and examination of internship research will also be considered. Prerequisite: ENVH 4910.

Subject: Environmental Technology	Number	Long Course Title	Min Units	Max Units	Long Description
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ENVR	4210	Industrial Pollution Control	3.00	3.00	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.
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Subject: Environmental Studies	Number	Long Course Title	Min Units	Max Units	Long Description
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ENVS	1010	Introduction to Environmental Studies	3.00	3.00	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.
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ENVS	2020	Environmental Perspectives	3.00	3.00	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	3.00	3.00	Fall, Summer. Field-based overview of environmental principles and concepts in context of their physical, cultural, social, economic, and ecological relationships. Emphasis on resource sharing and environmental issues in North America. Taught in the field while traveling to various sites. Corequisites: GEOL 2500, GEOL 2510, and ACS 2520 or permission of the instructor. Honors credit optional. Applicable to the BG Perspective (general education) social sciences and international perspective requirements.
ENVS	3010	Environmental Problems	3.00	3.00	Fall, Spring, Summer. In-depth study of specific environmental problems. Current and historic responses are examined through research and review of source materials. Emphasizes a synthesizing, multidisciplinary team approach to problem solving. Applicable to the BG Perspective (general education) social sciences requirement. Extra fee.
ENVS	3100	Environmental Field and Laboratory Methods	4.00	4.00	Fall. Essential field and laboratory techniques for environmental scientists. 3-hour lecture and 3-hour field/lab per week. Techniques include hydrology and water analysis; field sampling of aquatic and terrestrial plants, animals, and 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	3340	Natural Area Interpretation	3.00	3.00	Fall, Spring. Exploration of a variety of natural ecosystems, including floodplains, oak savanna, prairies, swamps and marshland to provide a basic understanding of their natural history, plant/animal interactions and area-appropriate restoration processes: emphasis is on skills, knowledge and current techniques for presentation of natural area attributes to the public. Prerequisite: ENVS 1010 or consent of instructor.
ENVS	4000	Special Topics in Environmental Studies	1.00	3.00	Fall, Spring, Summer. Selected topics and subject areas in environmental studies. Offered to cover current environmental issues. Prerequisite: consent of instructor. Can be repeated for a maximum of 9 credits, if topics differ. Extra fee.
ENVS	4010	Environmental Strategies	3.00	3.00	Fall, Spring. Investigation of strategies used by various organizations, industries, institutions and government agencies to solve current environmental problems. Models and simulation strategies are used to address toxic substances, water resources, pesticides, climate and wildlife dispersion. Two hours lecture/discussion, one two-hour lab. Prerequisites: ENVS 3010 and one statistics course.
ENVS	4020	Environmental Impact Statements	3.00	3.00	Fall, Spring. History, philosophy and legal authority for environmental impact statements and assessments. Specific documents are analyzed and the development of evidential information and techniques are included. Practice in writing an environmental impact statement is given using one or more current issues as a focus. Extra fee.
ENVS	4030	Geographic Information Systems	4.00	4.00	Fall. Collection, manipulation, integration and automated display of spatial data from various disciplines with particular emphases on environmental geology, resource management and spatial analysis. Three lectures and one three-hour laboratory. Credit allowed for no more than one: ENVS 4030, GEOL 4030 or GEOG 4240.
ENVS	4120	Great Lakes Ecosystems	3.00	3.00	Spring. An interdisciplinary study of Great Lakes ecosystems with emphasis on history, development, natural resources, environmental concerns, transboundary issues and the potential for international cooperation. Extra fee.

ENVS	4130	Applications in Environmental Geographic Information Systems	3.00	3.00	Spring. Geographic Information Systems practice and theory applied to environmental problems. The course focuses on the use of ArcView software for modeling and interpreting the natural environment. Lectures are integrated into project-based lab exercises and group projects. Prerequisite: ENVS 1010 or ENVH 3010.
ENVS	4150	Investigating Earth Systems	3.00	3.00	Fall and Summer. Inquiry-based investigations of local environmental data, use of data for student research, and reporting orally, in writing, and in multimedia presentations. Program option for both Environmental Science and Environmental Policy majors. Required for AYA science education 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	3.00	3.00	Spring. Use of strategies and resources to develop a personal environmental education philosophy. Curriculum design, service learning, field experience coordination and development of a proposal to fund an environmental education program using current source materials are stressed. Prerequisite: ENVS 1010, ENVS 2010, or ENVS 2530, or consent of instructor.
ENVS	4200	Environmental Planning	3.00	3.00	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	3.00	3.00	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	1.00	3.00	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	1.00	3.00	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	1.00	6.00	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	1.00	6.00	Fall, Spring, Summer. Intensive educational experience on selected environmental topics. May be repeated for credit with different topics. Prerequisite: ENVS 1010 or consent of instructor.

Subject: Environmental Health Technology	Number	Long Course Title	Min Units	Max Units	Long Description
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ENVT	2700	Occupational Safety and Hygiene	3.00	3.00	Regulatory considerations, evaluation and control of industrial hazards, personal protective equipment, employee assistance programs, accident prevention and investigation, emergency planning. Three hours lecture.
ENVT	2800	Applied Food Service ServSafe Certification Course	1.00	1.00	Covers the Hazard Analysis Critical Control Point (HACCP) food safety system principles, and the Ohio Food Rules.
ENVT	2900	Experimental Studies in the Environment	1.00	3.00	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	1.00	3.00	Paid work activity in environmental technology related to an occupational objective. One credit requires 180 hours of work. May be repeated up to 3 credits. Prerequisite: permission of site supervisor and adviser.

Subject: Ethnic Studies	Number	Long Course Title	Min Units	Max Units	Long Description
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ETHN	1010	Introduction to Ethnic Studies	3.00	3.00	Fall, Spring, Summer. This gateway course to the field of Ethnic Studies introduces students to interdisciplinary analyses of race and ethnicity in the U.S. The course explores the social construction of race and ideologies of race in colonial conquest, slavery, and immigration. It also examines processes and negotiations of racialization and the intersections of race with other hierarchies such as class, gender, and sexuality. Applicable to the BG Perspective (general education) cultural diversity in the United States requirement. Approved for Distance Ed.
ETHN	1100	Introduction to Latinos in the United States	3.00	3.00	Fall, Spring. Latino experience in the United States; cultures, life experiences and the limited political, education, socio-economical opportunities of this minority. Applicable to the BG Perspective (general education) cultural diversity in the United States requirement.
ETHN	1200	Introduction to Black Studies	3.00	3.00	Fall, Spring, Summer. An introduction to the history of black, or African American Studies, tracing it from its contentious 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 States requirement.
ETHN	1300	Introduction to Asian American Studies	3.00	3.00	Fall. Similarities and differences of the various components of the Asian American category with reference to their individual histories and collective situation from the 19th century to the present. Applicable to the BG Perspective (general education) cultural diversity in the United States requirement.
ETHN	1600	Introduction to Native American Studies	3.00	3.00	Fall, Spring. Introduction to the Native American studies as an interdisciplinary discipline. Examines 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.

ETHN	2010	Ethnicity and Social Movements	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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, Indian activism, natural resources, Native 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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	Spring. Contributions made by African and African American writers to the rise of nationalism.

ETHN	3300	Race and Labor in the United States	3.00	3.00	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	3.00	3.00	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 legitimization functions for film. Applicable to the BG Perspective (general education) humanities and arts requirement.
ETHN	3440	African Women	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	1.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	Racial Discourses and U.S. Social Policies	3.00	3.00	Fall, Spring. This course surveys the intellectual history of race from antiquity to the late twentieth century. It examines both the history of "scientific" and popular thinking about race and racial differences as well as how the development of racial belief systems influenced social policy in the United States.

ETHN	4550	Latina/o Gender and Sexuality	3.00	3.00	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.
ETHN	4600	Third World Cinema	3.00	3.00	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	1.00	3.00	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	3.00	3.00	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	4850	Qualitative Research Methods	3.00	3.00	Introduces students to modes of qualitative social research commonly found in field of ethnic studies and American culture studies. Focus on data gathering process as well as data analysis. Credit only allowed for one of ETHN 4850, ACS 4050.
ETHN	4860	Senior Project	3.00	3.00	Fall, Spring, Summer. Directed individual research concerning issues in ethnic studies, resulting in a research paper. Prerequisites: ETHN 4850, ethnic studies major or minor, permission of instructor and approval of department Undergraduate Advisor.
ETHN	4890	Field Study in Ethnic Studies	1.00	3.00	Fall, Spring, Summer. Service learning course in which students are placed in local agencies, educational centers, or non-profit organizations that are relevant to the study of race and ethnicity. Prerequisites: Open only to Ethnic Studies majors with permission of the Department of Ethnic Studies Undergraduate Advisor. Graded S/U. May be repeated up to 3 hours.

Subject: Family & Consumer Sciences	Number	Long Course Title	Min Units	Max Units	Long Description
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FCS	3890	Supervised Field Experience	1.00	5.00	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	1.00	3.00	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	1.00	3.00	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	1.00	3.00	In-depth examination of topics in family and consumer sciences not covered by existing coursework. Repeatable once. Undergraduate credit only.
FCS	4890	Internship	5.00	12.00	Fall, Spring, Summer. Internship in a professional environment. Work settings are approved on an individual basis. May be repeated. Graded S/U.

Subject: Finance	Number	Long Course Title	Min Units	Max Units	Long Description
FIN	2000	Personal Finance	3.00	3.00	Personal financial management; budgeting, borrowing sources and costs; auto, property, and life insurance; home ownership financing; personal investment strategy; and retirement planning.
FIN	3000	Business Finance	3.00	3.00	Acquisition of assets and funding in business enterprise. Fundamentals of financial analysis, working capital management, and investment and financing decision making. Prerequisites: ACCT 2000 or ACCT 2210; ECON 2000 or ECON 2020; Junior standing.
FIN	3040	Entrepreneurial Finance	3.00	3.00	Financial issues facing entrepreneurial and small business ventures. Topics include capital acquisition, cash flow management, financial analysis and methods for harvesting the venture. Does not count toward finance specialization in the BSBA program. Prerequisites: ACCT 2000 or ACCT 2210; ECON 2000 or ECON 2020; and BA 2040. Concurrent registration permitted in BA 2040.

FIN	3400	Financial Markets	3.00	3.00	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	3.00	3.00	Advanced practices of financial management are developed. Financial models used in decision-making and their application to major areas of business finance are emphasized. Prerequisites: STAT 2120 or STAT 2200 and a grade of C or better in FIN 3000.
FIN	4100	International Financial Management	3.00	3.00	An extension of financial management to the international arena with emphasis on financial strategies of multinational corporations. Topics covered include foreign exchange markets, currency futures and options markets, swaps, international securities markets, managing and hedging currency risk, multinational financing strategies and capital budgeting, and international portfolio management. Prerequisite: grade of C or better in FIN 3000.
FIN	4120	Financial and Retirement Planning	3.00	3.00	Development of a client's comprehensive financial plan focusing on various aspects of personal retirement planning. Topics include construction and analysis of personal financial statements, education planning, retirement needs analysis and investments, qualified retirement plans, IRAs, distribution options, Social Security and Medicare benefits, and tax and government regulations affecting retirement plans. Prerequisite: grade of C or better in FIN 3000.
FIN	4200	Insurance and Employee Benefit Planning	3.00	3.00	Methods and alternatives for managing personal risk exposures. Topics include identifying risk exposures, legal aspects of insurance, life insurance needs analysis and policies, medical and disability insurance, Social Security benefits, long term care insurance, homeowners insurance, property and liability insurance, auto insurance, employee benefits, and financial planner ethics. Prerequisite: grade of C or better in FIN 3000.
FIN	4350	Investment Analysis and Management	3.00	3.00	Appraisal of investment risks of specific securities; valuation and suitability of specific securities for investment. Management of fixed-income and equity portfolios emphasizing the role that options and futures play in managing securities portfolios. Prerequisites: STAT 2120 or STAT 2200 and grade of C or better in FIN 3000.

FIN	4450	Management of Financial Institutions	3.00	3.00	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	3.00	3.00	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	1.00	3.00	On demand. In-depth study of selected areas or contemporary problems. May be offered individually as well as in classes depending on student needs and nature of material. May be repeated to six hours. Prerequisite: approval of chair and instructor.

Subject: Food & Nutrition	Number	Long Course Title	Min Units	Max Units	Long Description
FN	2070	Introduction to Human Nutrition	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	Fall and Summer. Geographic, economic, political, religious, environmental, and cultural influences on dietary patterns in the United States and other regions of the world. Emphasis is on skills needed for students to identify the relevant cultural food patterns among individuals and communities. Prerequisite: FN 2070 or consent of instructor. Extra fee.
FN	3310	Quantity Food Production	3.00	3.00	Fall. Planning and service of quantity foods for institutions and restaurants. Menu planning, purchasing, production scheduling, recipe standardization, receiving, storage and issuing. Two hours lecture, three hours clinical experience. Prerequisite: FN 2100 or consent of instructor.
FN	3350	Principles and Practice of Food Protection	3.00	3.00	Fall. Principles involved in identification and prevention of the causes of food contamination. Public health regulations and microbiological control measures in various food service operations. Could lead to Education Foundation Sanitation Certification. Three hours lecture.
FN	3720	Principles of Foodservice Management	3.00	3.00	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	1.00	5.00	On demand. Supervised work experience in an approved site. Contact hours and specific requirements arranged with FN faculty. May be repeated. Graded S/U.
FN	4310	Experimental Foods	3.00	3.00	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	3.00	3.00	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	3.00	3.00	Fall. Nutritional therapies for specific medical conditions. Physiological and biochemical basis for nutrition intervention in disease. Pathophysiology of major disease states and impact on nutritional status and normal metabolism. Assessment of nutritional status, implementation, monitoring, and evaluation of appropriate nutrition therapy. Prerequisites: BIOL 3320, CHEM 3080, FN 3100, FN 4320.
FN	4350	Life Cycle Nutrition: Pregnancy to Adolescence	3.00	3.00	Fall. Nutrition of pregnant women, infants, and children in health and disease, from prenatal period to adolescence. Prerequisite: FN 2070 and FN 3100.
FN	4360	Life Cycle Nutrition: The Middle and Later Years	3.00	3.00	Spring, Summer. Psychological, physiological, and socio-economic factors affecting diet and nutritional needs in group and individual situations. Prerequisites: FN 2070 and FN 3100. Approved for Distance Ed.
FN	4380	Medical Nutrition Therapy II	3.00	3.00	Spring. 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. Continuation of FN 4340. Prerequisites: BIOL 3320, CHEM 3080, FN 3100, FN 4320, FN 4340.
FN	4400	Research Methods in Nutrition, Foods, and Dietetics	3.00	3.00	Fall. Methods in research design, data analysis, and presentation. Techniques in dietetics, nutrition, foods, foodservice management, and clinical studies. Preparation of research proposals, evaluating published research, and ethical issues. Prerequisites: FN 3100, FN 4320 and MATH 1150 or equivalent.
FN	4420	Laboratory Methods in Food and Nutrition Sciences	4.00	4.00	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	1.00	3.00	On demand. Supervised individual study. In-depth study of topics or problems in food and/or nutrition sciences. May be repeated. Prerequisite: consent of department.
FN	4800	Seminar in Food and Nutrition	3.00	3.00	Fall, and on demand. In-depth examination of contemporary issues, concepts, and topics in food and nutrition. Corequisite: FN 4400.

FN	4890	Internship in Food and Nutrition	5.00	12.00	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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Subject: French	Number	Long Course Title	Min Units	Max Units	Long Description
FREN	1010	Elementary French I	4.00	4.00	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	4.00	4.00	Fall, Spring. FREN 1010 continued. Four class periods and scheduled oral practice each week. Prerequisites: FREN 1010 or one year of French in high school. Applicable to the BG Perspective (general education) humanities and arts and international perspective requirements.
FREN	2010	Intermediate French I	3.00	3.00	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	3.00	3.00	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	3.00	3.00	Fall, Spring, Summer. This course will teach students the knowledge, strategies, and techniques for reading French at the intermediate level. Readings in French; class conducted in English. Prerequisite: FREN 2010 or three years of high school French. Does not count as prerequisite for 3000-level class. Applicable to the BG Perspective (general education) humanities and arts and international perspective requirements.
FREN	2200	Language and Culture through Community Living	2.00	2.00	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	3.00	3.00	Fall and/or Spring. An introduction to the cultural, social, intellectual, and artistic life of French-speaking peoples from the perspective of French-American relations and intercultural comparisons and using readings, film, music, and other media. Readings and class in English. Does not fulfill language requirements or count toward the major or minor in French. Applicable to the BG Perspective (general education) humanities and arts and international perspective requirements.
FREN	2840	French Canadian Life Through Literature	3.00	3.00	Selected authors studied in translation. Use of a socio-critical approach enables students to discover the particular aspects of the French Canadian expression of American experience.
FREN	3000	Preparation for Study in France and Burkina Faso	1.00	1.00	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	3500	Problems in Translation	3.00	3.00	Practical work in translingual rendering of expository texts, stressing vocabulary building and critical reading. Prerequisite: FREN 2020 or FREN 2120.
FREN	3530	French Diction	3.00	3.00	French pronunciation; syllabification, stress, linking, intonation. Prerequisite: FREN 2020. Usually taught abroad.
FREN	3550	French Linguistics	3.00	3.00	Fall. Sound system and grammatical structures of modern French; practical application. Prerequisite: FREN 2020. Usually taught abroad.
FREN	3560	Skills for Oral Proficiency	3.00	3.00	Fall, Spring. Development and intensive practice of oral skills and communication strategies. Emphasis on self-expression. Prerequisite: FREN 2020 or four years of French in high school.
FREN	3570	Skills for Effective Writing	3.00	3.00	Fall, Spring. Development and intensive practice of writing skills and communication strategies. Emphasis on stylistics. Prerequisite: FREN 2020 or four years of French in high school.
FREN	3630	Introduction to French Literature	3.00	3.00	Spring. Study of key authors, periods, genres, or themes in French literature. Prerequisites: FREN 3560 and FREN 3570, or permission of instructor.

FREN	3660	Introduction to Francophone Literature	3.00	3.00	Fall. Comprehensive study and discussion of key texts and issues in the literature of the French-speaking world outside France. Study of fictional and non-fictional texts. Prerequisites: FREN 3560 and FREN 3570, or permission of instructor.
FREN	3730	Introduction to French Civilization	3.00	3.00	Fall. Past and/or contemporary French culture and civilization. Includes French history, politics, education, art, media, and/or popular culture. Prerequisites: FREN 3560 and FREN 3570, or permission of instructor.
FREN	3760	Introduction to Francophone Civilizations	3.00	3.00	Spring. Cross-century study of historical, social, cultural, and economic aspects of French-speaking world outside France through political, social, intellectual, and artistic texts. Prerequisite: FREN 3560 and FREN 3570, or permission of instructor.
FREN	3950	Workshop in French	1.00	3.00	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	4.00	4.00	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	3.00	3.00	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	3.00	3.00	Continued study of pronunciation, stress and intonation. Prerequisite: FREN 3530. Usually taught abroad.
FREN	4540	Translation Workshop	3.00	3.00	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	3.00	3.00	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 353, FREN 356, and FREN 357.

FREN	4580	Career French I	3.00	3.00	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	3.00	3.00	Fall and/or Spring. Advanced study of selected texts, authors, genres, or themes in French literature. May be repeated. Prerequisite: FREN 3630.
FREN	4660	Topics in Francophone Literature	3.00	3.00	Fall and/or Spring. Advanced study of selected texts, authors, genres, or themes from the French-speaking world outside France. May be repeated. Prerequisite: FREN 3660.
FREN	4700	Independent Readings in French	1.00	3.00	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	3.00	3.00	Fall and/or Spring. Advanced study of selected themes in French culture and civilization. May be repeated. Prerequisite: FREN 3730.
FREN	4760	Topics in Francophone Civilizations	3.00	3.00	Fall and/or Spring. Advanced study of topics in French-speaking cultures/civilizations outside France including colonialism, nationalism, immigration, cultural pluralism. Emphasis on cultures represented may vary. Prerequisite: FREN 3760.
FREN	4880	Seminar in French Language, Literature, Art, or Civilization	3.00	3.00	Fall and/or Spring. Intensive study of author, literary school, genre, theme, or advanced language issue. May be repeated if topics clearly differ. Prerequisite: FREN 3630 or FREN 3660.

Subject: Future Studies	Number	Long Course Title	Min Units	Max Units	Long Description
FTR	2000	Introduction to Futuring	3.00	3.00	A basic course in future studies covering a brief historical review of futuring, basic tools of analysis, the role of creativity and responsibility for our collective future.

Subject: Geography	Number	Long Course Title	Min Units	Max Units	Long Description
GEOG	1210	World Geography: Eurasia and Africa	3.00	3.00	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	3.00	3.00	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	3.00	3.00	Fall, Spring. Atmospheric elements and controls; earth-sun relationships, weather components, weather prediction, and climatic types and distribution. Two one-hour lectures, one-hour demonstration-discussion. Applicable to the BG Perspective (general education) natural sciences requirement.
GEOG	2130	Meteorology	3.00	3.00	Fall, Spring. Physical processes of atmosphere and relationships to daily weather patterns. Two one-hour lectures, one two-hour laboratory. Extra fee.
GEOG	2250	Geography of the Global Economy	3.00	3.00	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	3.00	3.00	Fall, Spring. Geographic influences upon human activities on the earth's surface. Cultural processes and global patterns of religion, language, education, technology, diet, health, resource use, political organization, economic activity, social organization, settlement, and population. Applicable to the BG Perspective (general education) social sciences and international perspective requirements.
GEOG	3000	Topics in Geography	3.00	3.00	Experimental courses considered part of regular offering. May be repeated with different topics.
GEOG	3030	Severe Weather	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	Analysis of the environmental and human geography of Africa, development opportunities and challenges, as well as contemporary interactions with other parts of the world.

GEOG	3490	Latin America	3.00	3.00	Spring. Topical geographic analysis of the physical, cultural, political, demographic, agricultural, industrial, and international trade features of Mexico, Central America, Caribbean America, and South America as they are related to development of the region. Applicable to the BG Perspective (general education) social sciences and international perspective requirements.
GEOG	3510	Ohio	3.00	3.00	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	3.00	3.00	Experimental courses considered part of regular offering. May be repeated with departmental permission.
GEOG	4020	Regional Economic Geography	3.00	3.00	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	3.00	3.00	Fundamentals and applications; drought, water resources, human comfort, health, architecture; short- and long-term climatic changes.
GEOG	4130	Introduction to Remote Sensing	3.00	3.00	Spring every other year. Principles and procedures used to obtain information about natural and cultural features through imagery derived from photographic, multispectral, thematic mapper and side-looking airborne radar sensor systems.
GEOG	4220	Computer Mapping	3.00	3.00	Fall or Spring. Map construction and display of geographical data using the computer. Prior completion of CS 1000 or GEOG 3210 recommended. Extra fee.
GEOG	4240	Geographic Information Systems	4.00	4.00	Collection, manipulation, integration and automated display of data with emphasis on geographic/spatial analysis. Three hours of lecture and three hours of lab. Prerequisite: GEOG 3210 or GEOG 4220 or consent of instructor. Credit allowed for no more than one: GEOL 4030, ENVS 4030, GEOG 4240. Extra fee will not apply to online course. Extra fee.

GEOG	4250	Applied Geographic Information Systems-- Human Dimensions	3.00	3.00	Spring every other year. Application of advanced GIS techniques to spatial analysis of human issues such as geodemographics, socio-economic, urban, and regional planning. Two lectures, one two-hour laboratory. Prerequisite: GEOG 4240 or GEOL 4030/ENVS 4030 or consent of instructor.
GEOG	4260	Urban Geography	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	1.00	3.00	Readings and research on varied topics to suit needs of student. May be repeated up to 6 hours.
Subject: Geology	Number	Long Course Title	Min Units	Max Units	Long Description
GEOL	1000	Introduction to Geology	3.00	3.00	Fall, Spring, Summer. The earth; physical and historical geology; including economic, social and environmental aspects. Not open to geology majors and minors. Credit allowed for no more than one: GEOL 1000, GEOL 1010, GEOL 1040. Applicable to the BG Perspective (general education) natural sciences requirement. Approved for online delivery.

GEOL	1010	Earth Systems Science	3.00	3.00	Survey of the connections, evolution and interactions between atmosphere, biosphere, hydrosphere, solid earth, and the universe. Two lectures and one two-hour laboratory. Appropriate for science education majors. Credit allowed for no more than one: GEOL 1000, GEOL 1010, GEOL 1040. Not applicable to the BG Perspective (general education) natural sciences requirement.
GEOL	1040	Earth Environments	4.00	4.00	Fall, Spring, Summer. Introduction to the science of geology. Relationship of man to physical environment of the earth and its natural resources. Three lectures and one two-hour laboratory. Credit allowed for no more than one: GEOL 1000, GEOL 1010, GEOL 1040. Applicable to the BG Perspective (general education) natural sciences requirement. Extra fee.
GEOL	1050	Life Through Time	4.00	4.00	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	4.00	4.00	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	3.00	3.00	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	1990	Independent Study	1.00	3.00	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	3.00	3.00	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	3.00	3.00	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	5.00	5.00	Fall. Introduction to geologic materials, structures, and landforms. Geology of selected national parks and regional geologic hazards. Emphasis on scientific methods. Experience reporting the findings of experiments orally and in writing. Interdisciplinary approach combining social and geological sciences. Taught as a 9-week field/camping trip across the U.S.A. Corequisites: GEOL 2510, ACS 2520, and ENVS 2530. Prerequisite: permission of instructor. With GEOL 2510, satisfies the natural sciences lab sequence and general education requirements. Honors credit optional. Applicable to the BG Perspective (general education) natural sciences requirement. Extra fee.
GEOL	2510	Field-based Historical Geology	5.00	5.00	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	4.00	4.00	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	4.00	4.00	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	4.00	4.00	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	4.00	4.00	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	4.00	4.00	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	3.00	3.00	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	4.00	4.00	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	3.00	3.00	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	3.00	3.00	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 1120; or consent of instructor.
GEOL	4010	Economic Geology	4.00	4.00	Classification and genesis of metallic ore deposits illustrated by study of classic areas. Three lectures and one two-hour laboratory. Prerequisites: GEOL 3020 and GEOL 3090.
GEOL	4020	Computer Applications in Geology	3.00	3.00	Methods for the retrieval, extraction and manipulation of geological information and numerical data using computers. Prerequisites: minimum of nine credit hours in GEOL and knowledge of a computer language; or consent of instructor.
GEOL	4030	Geographic Information Systems	4.00	4.00	Collection, manipulation, integration and automated display of spatial data from various disciplines with particular emphases on environmental geology, resource management and geographic analysis. Credit allowed for no more than one: GEOL 4030, ENVS 4030, GEOG 4240.
GEOL	4050	Volcanology	3.00	3.00	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	4.00	4.00	Systematic study of surface processes and landforms; applications to environmental and historical geology. Three lectures and one two-hour laboratory. Prerequisite: GEOL 1040, GEOL 1050, GEOL 1060, or GEOL 2500.
GEOL	4150	Paleontology	4.00	4.00	Fall. Principles of paleontology; major groups of fossil animals. Three lectures and one two-hour laboratory. Field trips outside of class time required. Prerequisite: GEOL 1050 or consent of instructor.
GEOL	4190	Vertebrate Paleontology	3.00	3.00	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	3.00	3.00	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	4.00	4.00	Geochemistry of natural waters, including fluid/rock reactions, solution chemistry, solubility, and oxidation-reduction reactions. Three lectures and one three-hour laboratory. Prerequisites: GEOL 3020, MATH 1310 or MATH 1340 (may be taken concurrently) or consent of instructor.
GEOL	4320	Solid Earth Geophysics	4.00	4.00	Gravity, magnetic and seismic properties of the earth; plate tectonics. Three lectures and one two-hour problem-solving laboratory. Prerequisites: GEOL 3090, PHYS 2010 or PHYS 2110, or consent of instructor.
GEOL	4400	Geologic Remote Sensing	4.00	4.00	Use of remotely sensed multispectral data for geological applications. Data acquisition, image processing and interpretation. Recent advances in geologic remote-sensing research. Three lectures and one two-hour laboratory. Prerequisite: GEOL 3090.
GEOL	4450	Surface Water Hydrogeology	4.00	4.00	Geological aspects of flowing water at the earth's surface, emphasizing open-channel hydraulics, flood analysis, sediment transport and water quality. Three lectures and one recitation section. Prerequisite: GEOL 3160.
GEOL	4460	Groundwater Hydrogeology	4.00	4.00	Hydraulics of groundwater flow, hydrologic properties of geologic materials, evaluation of groundwater resources and contamination. Three lectures and one recitation section. Prerequisite: GEOL 3160.
GEOL	4700	Readings in Geology	1.00	3.00	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	1.00	3.00	Study of selected topic. May be repeated. Prerequisite: consent of instructor.
GEOL	4850	Current Topics in Geology	1.00	1.00	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	1.00	3.00	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	6.00	6.00	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	6.00	6.00	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	1.00	3.00	Fall, Spring, Summer. Experience with conducting and reporting the results of an original research project on a topic of interest in the geological sciences. Reporting the results will be done as a written report and oral presentation. Prerequisite: consent of instructor.

Subject: German	Number	Long Course Title	Min Units	Max Units	Long Description
GERM	1010	Elementary Language and Culture I	4.00	4.00	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	4.00	4.00	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	2.00	2.00	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	2.00	2.00	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	2010	Intermediate German I	3.00	3.00	Fall, Spring. Grammar review; development of the four skills. Three class periods and laboratory practice each week. Prerequisite: GERM 1020 or two years of high school German, or by placement. Applicable to the BG Perspective (general education) humanities and arts and international perspective requirements.

GERM	2020	Intermediate German II	3.00	3.00	Fall, Spring. GERM 2010 continued. Three class periods and laboratory practice each week. Prerequisite: GERM 2010 or three years of high school German, or by placement. Applicable to the BG Perspective (general education) humanities and arts and international perspective requirements.
GERM	2170	Intermediate Conversational German I	2.00	2.00	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	2.00	2.00	Spring. GERM 2170 continued. Prerequisite: GERM 2010 or permission of instructor.
GERM	2200	Studies Abroad	1.00	5.00	Literary, linguistic, or cultural studies completed as part of an approved study abroad program. May be repeated with different topics.
GERM	2310	Intermediate Reading	3.00	3.00	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	3.00	3.00	Readings in English of internationally known authors from German-speaking countries. May include Kafka, Mann, Hesse, Brecht, Grass and others. Course does not count toward a German major or minor. Applicable to the BG Perspective (general education) humanities and arts and international perspective requirements.
GERM	3000	Introduction to Study Abroad	1.00	1.00	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	3.00	3.00	Fall alternate years. Approaches to reading and interpreting representative works, primarily 20th century; development of reading comprehension, vocabulary skills, speaking ability (discussion), and intellectual appreciation. Also offered every fall in Salzburg. Prerequisite: GERM 2020 or permission of instructor.

GERM	3130	German Literature in Context	3.00	3.00	Fall alternate years. German literature in historical and social context based on topics such as crime, love, or mythology. Development of reading comprehension, vocabulary skills, speaking ability (discussion), and interpretive skills based primarily on 18th- and 19th-century texts. Also offered every spring in Salzburg. Prerequisite: GERM 2020 or permission of instructor.
GERM	3150	German Culture and Civilization	3.00	3.00	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	3.00	3.00	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	2.00	4.00	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	2.00	4.00	Spring. GERM 3170 continued. (May be repeated for credit in AYA Austria Program.) Prerequisite: GERM 3170 or permission of instructor.
GERM	3200	Studies Abroad	1.00	5.00	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	1.00	3.00	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	3.00	3.00	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	1.00	3.00	Topic chosen to meet curriculum needs and student requests. May be repeated to six hours with different topics.

GERM	4000	Seminar in German Studies	2.00	4.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	Advanced Composition and Conversation	2.00	4.00	Fall. Development of increased facility in speaking and writing. (May be repeated for credit in AYA Salzburg Program.) Prerequisite: GERM 3180 or permission of instructor.
GERM	4180	Stylistics, Syntax, and Structure of German	2.00	4.00	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	3.00	3.00	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	3.00	3.00	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	1.00	3.00	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	1.00	3.00	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	1.00	4.00	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	3.00	3.00	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	1.00	3.00	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.
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Subject: Gerontology	Number	Long Course Title	Min Units	Max Units	Long Description
GERO	1010	Aging, the Individual and Society	3.00	3.00	Fall, Spring, Summer on demand. Study of aging from a multidisciplinary perspective; focus on the way people are thought about, evaluated and treated on the basis of their age. Applicable to the BG Perspective (general education) social sciences requirement. Approved for Distance Education.
GERO	3010	Aging and Ethnicity in the United States	3.00	3.00	Fall. Examination and analysis of cultural diversity and ethnicity in the older population residing in the United States. Applicable to the BG Perspective (general education) cultural diversity in the United States requirement.
GERO	3250	Applied Social Gerontology	3.00	3.00	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	3.00	3.00	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	3.00	3.00	Spring. Demographic characteristics, health status of older adults; impairments and chronic conditions most typically demonstrated by older adults; pertinent medical terminology; formal and informal supports available to address the health care needs of older adults. Prerequisites: AHS/GERO majors and GERO minors only; GERO 1010 and BIOL 2050.
GERO	4050	Cross-Cultural Aging	3.00	3.00	Summer. Cross-cultural analysis of the aging process and the problems of the aged throughout the world. Applicable to the BG Perspective (general education) social sciences and international perspective requirements.

GERO	4100	Social Policy & Programs	3.00	3.00	Fall. An evaluation of social policy and the implications for the provision of programs and services for older adults in the United States. Administration of human service agencies with aging clients. Goal setting, staffing, evaluation, budgeting and organizational structures. Prerequisites: GERO 1010; GERO majors and minors only.
GERO	4110	Principles of Nursing Home Administration	3.00	3.00	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 Evaluation and Grant Writing	3.00	3.00	Spring. Funding potential, methods, design, evaluation and proposals in human service agencies with a special emphasis on grant writing. Prerequisites: GERO 1010 and GERO 4100; GERO majors and minors.
GERO	4220	Research in Social Gerontology	4.00	4.00	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	3.00	3.00	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	3.00	3.00	Spring. An introduction into the prevention and treatment of late-life mental disorders. The focus is on the continuum of mental health needs, including promotion of optimal mental health as people age, prevention and early intervention in mental disorders, culturally responsive assessment of mental disorders, and effective treatment of acute distress and severe mental illness. Prerequisites: GERO 1010; GERO 3300; Gero majors and minors only.
GERO	4700	Special Topics in Gerontology	1.00	3.00	On demand. Independent study on subject matter related to gerontology not otherwise offered. May be repeated. Prerequisite: consent of program director.

GERO	4910	Practicum in Gerontology	1.00	20.00	Fall, Spring, Summer. Experience in working under supervision in selected agencies providing services to the aged. Emphasis on practice rather than observation. May be repeated. Prerequisites: enrollment in gerontology program or permission of program director; junior or senior standing; 2.50 GPA prior to registration. Graded S/U.
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GERO	4930	Practicum Seminar	1.00	1.00	Fall, Spring, Summer. Analysis of problems and experiences encountered in practicum. Prerequisites: permission of program director and concurrent enrollment in GERO 4910. Graded S/U.
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Subject: German Russian East Asian	Number	Long Course Title	Min Units	Max Units	Long Description
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GREA	2500	Topics in Language and Culture	1.00	4.00	Small group and individualized work on special topics. May be repeated if topics differ.
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Subject: Greek	Number	Long Course Title	Min Units	Max Units	Long Description
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GRK	1010	Elementary Greek I	4.00	4.00	Spring. Introduction to ancient Greek with a focus on listening, reading and writing.
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GRK	1020	Elementary Greek II	4.00	4.00	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.
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GRK	2010	Intermediate Greek I	3.00	3.00	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.
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GRK	2020	Intermediate Greek II	3.00	3.00	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.
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GRK	3610	Intermediate Greek Literature I	3.00	3.00	Fall. Grammatical review and advanced reading of ancient Greek texts. Prerequisite: GRK 2020 or consent of section leader and instructor.
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GRK	3620	Intermediate Greek Literature II	3.00	3.00	Spring. Grammatical review and advanced reading of ancient Greek texts. Prerequisite: GRK 2020 or consent of section leader and instructor.
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GRK	4700	Readings in Greek Literature	1.00	3.00	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.
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Subject: General Studies Writing	Number	Long Course Title	Min Units	Max Units	Long Description
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GSW	1100	Intensive Introduction to Academic Writing	5.00	5.00	Fall, Spring. Basic expository writing; emphasis on organizing and developing essays of at least 800 words for college-educated audiences. Additional emphasis on development of skills in sentence structure, usage, and mechanics. Placement through pretesting. Students must complete course and program portfolio assessment successfully to receive an S grade and be eligible to enroll in GSW 1120. Students who receive a No Credit grade must enroll in GSW 1110. No more than 6 hours from GSW 1100, GSW 1110, and GSW 1120 may be applied toward graduation. Graded S/No Credit. Extra fee.
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GSW	1110	Introduction to Academic Writing	3.00	3.00	Fall, Spring, Summer. Basic expository writing; emphasis on organizing and developing coherent essays of at least 800 words for college-educated audiences. Placement through pretesting or No Credit grade in GSW 1100. Students must complete course and program portfolio assessment successfully to receive an S grade. No more than 6 hours from GSW 1100, GSW 1110, and GSW 1120 may be applied toward graduation. Graded S/No Credit. Extra fee.
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GSW	1120	Academic Writing	3.00	3.00	Fall, Spring, Summer. Expository writing including research paper; emphasis on analytical writing based on critical reading. Placement through pretesting or successful completion of GSW 1100 or GSW 1110. Students must complete course and program portfolio assessment successfully to receive a passing grade. Graded ABC/No Credit. Extra fee.
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Subject: Human Development & Family Studies	Number	Long Course Title	Min Units	Max Units	Long Description
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HDFS	1050	Human Development across the Lifespan	3.00	3.00	Fall, Spring. Individual and family developmental theories, examination of major domains of knowledge in human development, personal application.
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HDFS	1060	Families, Communities, and Schools	3.00	3.00	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	3.00	3.00	Fall, Spring. Living patterns of the American black family: historical development, present status, strengths, problems and prognosis. Applicable to the BG Perspective (general education) cultural diversity in the United States requirement.
HDFS	2020	Contemporary Marriages and Families	3.00	3.00	Fall, Spring. Analysis of trends in marriage and family relationships in modern society, including family processes through the life cycle. Applicable to the BG Perspective (general education) social sciences requirement.
HDFS	2200	Infant and Toddler Development	3.00	3.00	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	3.00	3.00	Fall, Spring. The course addresses cognitive, social, emotional, and physical development of children from conception through the middle years. Developmental theory and methodology will be addressed as children growing up in diverse families, communities, and cultural contexts are examined.
HDFS	2240	Program Planning for Young Children	3.00	3.00	Play, materials, methods for enhancing development of children under six. Planning, implementing, and evaluating experiences and activities with groups of young children. C/F hrs.: 50. Extra fee.
HDFS	2250	Family Systems & Community Partnerships	3.00	3.00	Fall, Spring. This course uses ecological systems theory as a foundation for understanding family dynamics, parenting and family and cultural diversity as it applies to early childhood education. This knowledge will be applied to family, school, and community partnerships.
HDFS	2280	Preadolescent and Adolescent in Family and Community	3.00	3.00	Fall. Development and socialization of preadolescents and adolescents; youth growth, culture and potential problems. Focus on family and peers. A review of research relevant for intervention or service programming. Prerequisite: HDFS 1050 or consent of instructor.
HDFS	2290	Adult Development and Aging	3.00	3.00	Fall. Introduction to current theory and research related to adult development and aging from a family development and life course perspective. Prerequisite: HDFS 1050 or consent of instructor.

HDFS	3010	Teaching Young Children I: Preschool	3.00	3.00	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	3.00	3.00	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	3.00	3.00	Spring. Families' allocation of human and non-human resources. Prerequisites: HDFS 1060, HDFS 2020 and sophomore status.
HDFS	3200	Pre-Kindergarten Practicum	3.00	3.00	Fall, Spring. Supervised participation with pre-kindergarten children in a pre-kindergarten setting. Weekly seminar. Transportation required. C/F hours: 120. Prerequisites: HDFS 3030 with C or better, admission to early childhood education program. Graded S/U.
HDFS	3220	Child Development Practicum	3.00	3.00	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	3.00	3.00	Fall. Stresses related to children, adolescents, and families throughout the life cycle. Emphasis on theory and research related to family role(s) and coping strategies. Prerequisites: HDFS 2020 and sophomore status.
HDFS	3270	Family Interaction	3.00	3.00	Spring. Course focuses on interaction processes within family systems and how these are affected by larger social systems. Emphasis on principles and patterns of family communication, theories of family functioning, and family conflict management. Prerequisites: HDFS 1050 and HDFS 2020 or consent of instructor.

HDFS	3900	Professional Development in Human Development and Family Studies	3.00	3.00	Fall, Spring. Using a human development and family life perspective, professional development, ethics, and policy issues will be examined in a seminar format. Recommended that this course be taken the semester prior to the internship, HDFS 4890. Prerequisites: HDFS 1050, HDFS 2020, junior status.
HDFS	4070	Research in Human Development and Family Studies	3.00	3.00	Spring. Research methodology: completing a research project on a topic of the student's choice in the area of human development and family studies. Prerequisite: junior or senior standing.
HDFS	4080	Family Diversity	3.00	3.00	Spring. Investigation of family patterns among racial, ethnic and cultural minority groups in the United States. Theoretical analysis of minority family systems. Prerequisite: sophomore standing. Applicable to the BG Perspective (general education) cultural diversity in the United States requirement.
HDFS	4100	Child and Family Policy	3.00	3.00	Fall. The identification, development, implementation, and evaluation of public, private sector, and social policies that pertain to children and families. Prerequisites: HDFS 1060 and Junior Status.
HDFS	4110	Parenting Processes	3.00	3.00	Spring. Theories and processes of parenting with an emphasis on the inter-personal dynamics of parent-child relationships. Prerequisites: HDFS 1050, HDFS 2020.
HDFS	4200	Nurturing Positive Behavior	3.00	3.00	Fall, Spring. The course explores theoretical explanations, developmental, individual, and contextual factors influencing social learning in young children. Implications for individual and group guidance of young children as well as interventions that facilitate learning, independence, self-control, and positive social interactions are covered. Must be taken as part of ECE Field Block I. Transportation required. Prerequisite: admission to early childhood education program.
HDFS	4210	Parent/School/Community Partnerships	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	Spring. Marriage and family counseling, including professional issues, major theories and techniques, introduction to family counseling skills. Prerequisites: HDFS 1050 and HDFS 3020 or consent of instructor.
HDFS	4280	Sexuality in Human Development and Family Studies	3.00	3.00	Analysis of sexuality through the lifespan and within the context of family interaction. Focus on process of sexual development and on relationship dynamics. Intended for students with backgrounds in sexual physiology and the social-psychological aspects of human sexuality. Not open to students with credit for HP 3380.
HDFS	4290	The Family in the Middle and Later Years	3.00	3.00	Spring. The family in the middle and later years, with emphasis on relationship between spouses, and with children and grandchildren. Identification and critical analysis of factors associated with success and problem areas for such families.
HDFS	4300	Family Life Programming and Evaluation	3.00	3.00	Fall, Spring. Examine family life education programs and practices along with the various dimensions of an educator's role. A critical appraisal of students' professional competency to teach family life education material will also be completed. Prerequisite: Junior Status.
HDFS	4504	Development and Learning in Grades 4 and 5	3.00	3.00	Summer. This class emphasizes ages and stages of children's growth and development in grades 4 and 5 (typically the ages of 8 to 11). 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 11-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.
HDFS	4890	Internship	7.00	12.00	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	1.00	7.00	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.
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Subject	Number	Long Course Title	Min Units	Max Units	Long Description
HHS	1000	Seminar Health and Human Services	1.00	5.00	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	1.00	4.00	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	1.00	5.00	On demand. Interdisciplinary study of special health or human service topics. May be repeated. Prerequisite: consent of dean's office.
Subject: History	Number	Long Course Title	Min Units	Max Units	Long Description
HIST	1510	World Civilizations	3.00	3.00	Fall, Spring, Summer. Comparative study of how and why economic, social, political and intellectual factors shaped and defined the history of selected Western and non-Western civilizations in the ancient and medieval periods. Applicable to the BG Perspective (general education) social sciences and international perspective requirements.
HIST	1520	The Modern World	3.00	3.00	Fall, Spring, Summer. Comparative study of how and why selected economic, social, political and intellectual revolutions of the modern world have transformed and are shaping contemporary European and non-Western cultures. Applicable to the BG Perspective (general education) social sciences and international perspective requirements.

HIST	1800	Asian Civilizations	3.00	3.00	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	2.00	3.00	On demand. Study of selected topics, methods, or subject areas. May be repeated if topics differ.
HIST	2050	Early America	3.00	3.00	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	3.00	3.00	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	2.00	3.00	On demand. Study of selected topics, methods, or subject areas.
HIST	3010	American Military History	3.00	3.00	Summer. Development of American military institutions, policies, strategy, tactics from American Revolution to present.
HIST	3030	World War II	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	Spring. Precolonial background, early exploration, settlement, Ohio's place in national development in the 19th and 20th centuries.
HIST	3090	Latin America Before Independence	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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; keyed to causes and effects of Nazi totalitarianism and racism.

HIST	3770	20th Century Europe	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	1.00	3.00	On demand. Content and theme vary with instructor. Designed to meet needs and interest of nonmajors. Course may be taken more than once for credit if topics differ.
HIST	4000	Topics in History	2.00	3.00	On demand. Study of selected topics or subject areas. Course may be taken more than once for credit if topics differ.
HIST	4010	Caesar and Christ: Social Worlds of Late Antiquity and Early Christianity	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	On demand. Causes, course and consequences of the movement for independence in colonial British North America. Detailed analysis of strategies and campaigns of the War for Independence and of the development of state and national constitutional republicanism.
HIST	4250	Early National U.S., 1789-1848	3.00	3.00	Fall. Development and growth of American social, political and economic institutions from the ratification of the Constitution to the Mexican War. Topics include the emergence of new ideologies of race and gender, the market revolution, slavery and the Old South, antebellum religion and reform.
HIST	4260	Civil War and Reconstruction, 1861-1877	3.00	3.00	Spring. Political, economic and cultural conditions during the War; resulting problems to peoples and governments of both sections continuing through postwar period.
HIST	4280	America Becomes Modern: 1877-1917	3.00	3.00	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	3.00	3.00	On demand. Why and how the U.S. became a great, and then a global power. The new "associational" state, World War I and World War II, consumer culture, the "new" woman, the Great Depression. Applicable to the BG Perspective (general education) social sciences requirement.
HIST	4300	U.S. Since 1945: Affluence and Anxiety	3.00	3.00	Spring, Summer on demand. Politics: persistence and demise of the New Deal party system; congressional coalitions. Public policy: Fair Deal, Eisenhower Equilibrium, Great Society, Reagan Revolution. Society: Red Scare, prosperity and poverty, conformity, black struggle, student revolt, feminism, Middle America and reaction to protest.
HIST	4320	Aspects of African American History	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	Spring. U.S. response to international problems since WWII with emphasis on the Cold War rivalry with the Soviet Union and China, the rise of the Third World, the wars in Korea, Vietnam, and the Persian Gulf, and U.S. involvement in Asia, the Middle East, Latin America, and Africa.
HIST	4410	Ancient Greece (1000- 400 B.C.)	3.00	3.00	On demand. Ancient Greek society and culture from dark ages through golden age of 5th century. Resourcefulness of Hellenism in democratic politics, imperialistic policies and classic products of Periclean Athens. Weakness of Greek civilization in coping with crises engendered by Atheno-Peloponnesian war.

HIST	4420	Roman Revolution: From Gracchi Through Caesar Augustus	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	On Demand. Anti-Semitism as a historical phenomenon, with emphasis on German National Socialism. Causes and consequences of the Holocaust; effects on European Jewry; post-war Nazi and racist movements in Germany.
HIST	4580	England, 55 B.C.-1689	3.00	3.00	Fall. Major constitutional, economic, political, religious and social developments through the 17th century: making of the Anglo-Saxon kingdom, feudal government and society, crisis of late medieval England, Tudor restoration of order, 17th-century civil war and revolution.
HIST	4590	Great Britain, 1689-Present	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	1.00	3.00	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	1.00	3.00	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	1.00	3.00	Fall, Spring, Summer. Individual readings in consultation with instructor in fields of special historical interest. Prerequisites: consent of department chair and instructor. May be repeated.

Subject: Health Information Technology	Number	Long Course Title	Min Units	Max Units	Long Description
HIT	1000	Introduction to Health Information Systems	3.00	3.00	Survey of health care delivery systems and their levels of organization. Basic policies and procedures as they relate to technical information management standards as required by accreditation or licensing agencies. Three hours lecture, 24 hours clinical instruction.
HIT	1040	Medicolegal Aspects of Health Information	3.00	3.00	The management of medical records and other health information as legal documents, confidential communications, consents and authorizations for release of information. Current legal issues and problems.
HIT	1120	Coding and Classification Systems ICD-9-CM	3.00	3.00	Coding, classifying and reimbursement systems utilizing ICD-9-CM. Skill in utilizing computerized encoding systems and application of reimbursement systems. Three hours lecture, 16 hours of clinical instruction per semester. Prerequisites: AHTH 1310 or equivalent, AHTH 1100 or MEDT 3010, and AHTH 1600, or permission of instructor.
HIT	1600	Comparative Health Records	1.00	3.00	Review of current record format in the non-acute setting, including accreditation guidelines and standards for content. Prerequisite: HIT 1000 and HIT 1120 or HIT 2030, or junior standing in an allied health program with permission of instructor.

HIT	2000	Information Systems for HIT	3.00	3.00	Components of information technology as it relates to health care professions including hardware, software, networking, connectivity and telecommunications as well as using computers for expert systems and obtaining health information online. Advanced system applications and future directions for computers in health care. Prerequisites: HIT 1000 and MIS 2000 or MIS 2000 and permission of instructor.
HIT	2010	Laboratory Simulation	2.00	2.00	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	2.00	2.00	Coding, classification, and reimbursement systems utilizing HCPCS and CPT. Prerequisites: AHTH 1310, AHTH 1100 or MEDT 3010, and AHTH 1600, or permission of instructor.
HIT	2050	Reimbursement Methodologies	2.00	2.00	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 Ed.
HIT	2100	Organization and Supervision of Health Information	1.00	1.00	Principles of organization and supervision in order to develop effective skills in leadership, motivation and team building techniques in the multidisciplinary health care industry. Emphasis on organizational skills applicable to the health information field. Prerequisite: HIT 1000 and HIT 2110 or junior standing in health care major with permission of instructor.
HIT	2110	Health Care Statistics and Data Literacy	3.00	3.00	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 Ed.
HIT	2130	Advanced Coding	2.00	2.00	Coding, classifying and reimbursement systems utilizing ICD-9-CM and CPT-4. One hour lecture, two hours assigned lab. Prerequisites: HIT 1120 and HIT 2030.

HIT	2150	Clinical Assessment and Performance Improvement	1.00	1.00	Principles of quality assessment process and provision of a framework for joining skills in collecting and analyzing data in health care. One hour lecture, eight hours clinical instruction per semester and laboratory arrange. Prerequisites: HIT 2110 and BAT 2090, or junior standing in an allied health major with permission of instructor.
HIT	2200	Directed Practice	3.00	3.00	Application of health information management theory to professional practice under supervision by a clinical supervisor at an external agency. One hour lecture per week and 160 directed practice hours per semester. Prerequisite: HIT 2010. Graded S/U.
HIT	2900	Topics Medical Record Technology	1.00	3.00	Medical record technology projects, workshops and seminars dealing with current topics not covered in existing courses. May be repeated up to six credits if topics vary. Prerequisite: permission of instructor.
HIT	2910	Field Experience	1.00	3.00	Paid field work in a health information department under supervision of a Registered Record Administrator of Accredited Record Technician, or other qualified health information manager with the consultation of the program director. Prerequisite: permission of instructor.

Subject: Honors	Number	Long Course Title	Min Units	Max Units	Long Description
HNRS	2010	Introduction to Critical Thinking	4.00	4.00	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	3.00	3.00	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	3.00	5.00	Interdisciplinary social sciences seminar that integrates at least two different social sciences. Content and skills relate to both specific disciplines and social sciences in general. Satisfies Arts and Sciences group requirement. Prerequisite: admission to the honors program or permission of honors director. May be repeated up to 8 hours. Applicable to the BG Perspective (general education) social sciences requirement.
HNRS	2500	Honors Seminar: Natural Sciences	3.00	5.00	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	3.00	5.00	Integrates at least two different humanities. Content and skills relate to both specific disciplines and humanities in general. Satisfies Arts and Sciences group requirement. Prerequisite: admission to the honors program or permission of the honors director. May be repeated up to 6 hours. Applicable to the BG Perspective (general education) humanities and arts requirement.
HNRS	3000	Special Topics Seminar	1.00	3.00	Subject matter varies. Special seminars are elective courses designed to meet the interest and curiosity of honors students. Prerequisite: approval of honors director. May be repeated up to six hours if topics differ.
HNRS	3010	Critical Thinking about Values	6.00	6.00	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.

HNRS	3020	Values in Values in Ideas and Leadership	6.00	6.00	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.
HNRS	3030	Values in Action	6.00	6.00	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.
HNRS	3040	Values in Scholarship	6.00	6.00	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.
HNRS	4000	Special Topics Seminar	1.00	3.00	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 to six hours if topics differ.

HNRS	4900	Independent Study in Honors	1.00	5.00	For students who wish to pursue intensive study in honors independently or in conjunction with courses regularly offered. May be repeated. Prerequisite: consent of instructor and director of honors program.
HNRS	4980	Honors Project Development	1.00	1.00	Fall, Spring, Summer. Students will work with a single faculty member to more fully develop their initial ideas of an Honors Project. The outcomes of the course will be a thorough understanding of the background in their chosen field, a developed bibliography and an Honor Project proposal. Prerequisites: HNRS 2010, AS 2500H, 15 hours of Honors credit (including HNRS 2010 and AS 2500H) or permission of the Honors Director.
HNRS	4990	Honors Project	2.00	2.00	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.

Subject: Health Promotion	Number	Long Course Title	Min Units	Max Units	Long Description
HP	2150	Health & Wellness	3.00	3.00	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	3.00	3.00	Fall, Spring. An overview of health education theories, practice and planning models. Basic understanding of the determinants of health and behavior throughout the lifespan. Introduction to health promotion practices addressing the needs of individuals, families, and communities.
HP	3080	Health Communication Strategies	3.00	3.00	Spring, and Summer on Demand. Instructional techniques, public speaking, materials development, digital technology, interactive learning activities, literature search strategies, software packages, and basic newsletter and website development.
HP	3100	Program Planning and Evaluation	3.00	3.00	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	3.00	3.00	Fall on odd-numbered years. Introduction to the health care and health insurance systems, including demand management and managed care, as they relate to health promotion planning, implementation and evaluation.
HP	3380	Concepts of Human Sexuality	3.00	3.00	Fall, Spring, and Summer on demand. Health, biological, social, and psychological aspects of human sexuality. Prerequisite: junior standing or consent of instructor. Not open to students with credit for HDFS 4280. Approved for Distance Ed.
HP	3400	Drug Use and Abuse	3.00	3.00	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	1.00	6.00	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	1.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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 Ed.
HP	4700	Independent Study in Health Promotion	1.00	3.00	An in-depth study project of a topic of particular significance to the student. Project must be approved by project supervisor and program area chair prior to registration. May be repeated.
HP	4890	Internship in Health Promotion	10.00	15.00	Fall, Spring, Summer. Pre-professional field experience at an approved site; 40 hours of fieldwork required per credit hour. Prerequisites: Minimum GPA of 2.5 overall or > 2.75 in core courses, completion of HP 3100 and HP 4110 with a "C" or better, and approval of academic adviser. Application deadlines: 11/15 for Spring; 4/1 for Summer and Fall.

Subject: Humanities	Number	Long Course Title	Min Units	Max Units	Long Description
HUM	1010	Introduction to the Humanities	3.00	3.00	Experience of art including music, film, theatre, literature, dance, painting, sculpture, architecture, philosophy and the combined arts. Applicable to the BG Perspective (general education) humanities and arts requirement.
HUM	2000	Topics in Humanities	3.00	3.00	Basic humanities concepts organized on a single topic; self and culture, the combined arts, art and nature, mythology and symbolism, comic and tragic in art, language and culture. Can be repeated once if topics differ. Prerequisite: HUM 1010 or consent of instructor.

Subject: Interior Design	Number	Long Course Title	Min Units	Max Units	Long Description
ID	1160	Introduction to Interior Design	3.00	3.00	Spring. Overview of the interior design profession; examination of the design process with emphasis on creative problem solving and development of competencies in space planning and presentations.
ID	1170	Interior Design I	3.00	3.00	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	3.00	3.00	Fall, Spring. Programming, conceptualization and problem solving for residential and non-residential environments. Historic preservation and special population projects also included. Prerequisites: ID 1160, ID 1170. Six studio hours. Extra fee.
ID	3030	Contemporary Interiors	3.00	3.00	Fall, Spring. Design elements, principles and color theory used to create the human environment. Finish and material selection for furnishings and other surface treatments. Interior Design majors only. Prerequisite: ID 1160. Extra fee.
ID	3190	Interior Design III	3.00	3.00	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	3.00	3.00	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	2.00	2.00	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	3.00	3.00	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	3.00	3.00	Fall. Theoretical foundations, practical implications, techniques, and products for appropriate lighting design of residential and commercial interior environments. Prerequisites: ID 2190, ARCH 2360, and ID 3030. Graded A/F.
ID	4060	Housing the Family	3.00	3.00	Spring. Selecting, financing and adapting housing for families with varying lifestyles and needs. Energy efficiency and green/sustainability in housing, government role in housing, renting and owning options, and psychological needs emphasized.
ID	4170	Interior Design V	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	2.00	2.00	Fall. Ethics and business procedures for interior designers. Estimating, scheduling, budgeting and contract writing for installation of project. Preparation of resumes and portfolios for the profession. Prerequisites: ID 3190, ID 3290.

Subject: International Studies	Number	Long Course Title	Min Units	Max Units	Long Description
INST	2000	Introduction to International Studies	3.00	3.00	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	Interpersonal Communication in International Contexts	3.00	3.00	Fall, Spring. In this course, students examine the ways in which humans create, exchange, and interpret meaning as a function of their national cultures. Readings and applied assignments stress intercultural sensitivity, empathy, and cross-cultural communication competence. Credit allowed for only one of IPC 2100 and INST 2100. Prerequisite: sophomore standing.
INST	3800	Topics in International Studies	3.00	3.00	Fall, Spring, Summer. In-depth exploration of issues surrounding globalization as related to an aspect of culture, politics, history, communications, environmental and area studies. May be repeated if topics differ. Repeatable up to six credit hours. Prerequisite: INST 2000 or permission of instructor.

INST	4000	Seminar in International Studies	3.00	3.00	Spring or Fall. Capstone seminar which provides students with an intensive study of one or more major topics in international studies. Using approaches to inquiry in the field, students prepare a research project and formal presentation of their work related to their major focus in International Studies. Prerequisite: IS major or minor and junior status.
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INST	4890	Internship	1.00	12.00	Applied experience for majors. Specific proposal and permission of program adviser required prior to enrollment. Guidelines available from advisor. Graded S/U.
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Subject: Italian	Number	Long Course Title	Min Units	Max Units	Long Description
ITAL	1010	Elementary Italian I	4.00	4.00	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	4.00	4.00	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	4.00	4.00	Spring. Intensive course emphasizes grammatical structure of language and oral practice. Recommended for graduate students and students with prior language experience.
ITAL	2010	Intermediate Italian I	3.00	3.00	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	3.00	3.00	Spring. ITAL 2010 continued. Three class periods and laboratory practice each week. Prerequisite: ITAL 2010 or three years of Italian in high school. Applicable to the BG Perspective (general education) humanities and arts and international perspective requirements.

ITAL	2030	Italian Language Practicum (Italy)	3.00	3.00	Italian language instruction at BGSU affiliated language institutes in Italy. May be repeated for 6 hours of credit. Prerequisite: ITAL 2020.
ITAL	2600	Italian Literature in Translation	3.00	3.00	On demand. Readings in English of Italian authors. May include Dante, Petrarch, Boccaccio, Machiavelli, Galileo.
ITAL	2610	The Italian Cinema	3.00	3.00	Modern Italian culture and literature movements and their expression in cinema; demonstrates close relationship between literature and cinema. In English. Offered in fall of odd-numbered years. Extra fee.
ITAL	3030	Italian Language Practicum (Italy)	3.00	3.00	Italian language instruction at BGSU affiliated language institutes in Italy. May be repeated for 6 hours of credit. Prerequisite: ITAL 2030.
ITAL	3610	Introduction to Italian Literature	3.00	3.00	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	3.00	3.00	Political, social, intellectual, artistic life from Middle Ages through 19th century. Background for literary studies and preparation for teaching of Italian. Prerequisite: ITAL 2020.
ITAL	3720	Italian Civilization II	3.00	3.00	ITAL 3710 continued; political, social, intellectual, artistic life of modern Italy. Prerequisite: ITAL 2020.
ITAL	4700	Independent Readings in Italian	1.00	3.00	For the advanced student who wishes to study a particular author or period, or a problem in language or civilization. Prerequisites: consent of chair of department and instructor. May be repeated.
ITAL	4880	Italian Literature: Advanced Studies	3.00	3.00	Study of author, literary school, genre or selected theme. May be repeated to nine hours if topics are clearly different. Prerequisite: ITAL 3610.

Subject: Japanese	Number	Long Course Title	Min Units	Max Units	Long Description
JAPN	1010	Elementary Language and Culture I	4.00	4.00	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	4.00	4.00	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	2.00	6.00	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	4.00	4.00	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	4.00	4.00	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	3.00	3.00	Japanese culture, its evolution, and manifestations in the arts, social life, folkways, religious beliefs, and other areas of life. Presentations, readings, and writing in English. Applicable to the BG Perspective (general education) humanities and arts requirement.
JAPN	2160	Contemporary Japanese Society	3.00	3.00	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	2.00	6.00	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	3.00	3.00	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	3.00	3.00	Spring. JAPN 3010 continued. Three class periods and scheduled oral practice each week. Prerequisite: JAPN 3010 or equivalent.
JAPN	3120	Introduction to Japanese Literature	3.00	3.00	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	3.00	3.00	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	1.00	3.00	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	1.00	3.00	Independent reading for the advanced student. Prerequisites: arrangement with instructor and consent of department chair prior to registration. May be repeated.
Subject: Journalism	Number	Long Course Title	Min Units	Max Units	Long Description
JOUR	1000	Introduction to Mass Communication	3.00	3.00	Fall, Spring, Summer. Modern journalism and mass communication; mass communication media and effects; role and influence of journalistic media such as newspapers, magazines, broadcast media, photojournalism, computers and related fields of advertising and public relations. Open to nonmajors. Credit not given for both JOUR 1000 and TCOM 1030.
JOUR	1500	Multimedia Reporting Skills	1.00	1.00	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 1000 or concurrent registration in JOUR 1000 and access to a suitable consumer-grade still/video camera and digital voice recorder. Open to journalism pre-majors and minors only or with permission of instructor.
JOUR	2000	Introduction to Journalistic Writing	3.00	3.00	Fall, Spring, Summer. Introduction to newspaper, broadcast and public relations writing; emphasis on grammar, spelling, punctuation and sentence structure. Prerequisites include: at least 30 credit hours; GSW 1120; JOUR 1000 with at least a C; and an overall grade point average of 2.7. Credit not allowed for both JOUR 2000 and JOUR 2010. Extra fee.

JOUR	2010	Journalism Techniques for Nonmajors	3.00	3.00	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	3.00	3.00	Fall, Spring, Summer. News gathering and news writing for all types of news stories ranging from the simple, factual story to the complex, specialized story. Practice in covering assignments for publication. Prerequisite: JOUR 2000. Extra fee.
JOUR	2900	Specialized Journalism Basic Skills	1.00	3.00	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	3.00	3.00	Introduction to news reportage through visual media. Includes sections on basic photographic techniques, such as composition, exposure, camera handling, film development and scanning. Also includes caption writing, news judgement, journalism ethics, publication design, desktop publishing and computer manipulation of images. Prerequisites: JOUR 2000 and access to 35mm camera. Extra fee.
JOUR	3150	Visual Editing	3.00	3.00	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	3.00	3.00	Fall, Spring. Developing story ideas, researching and writing newspaper and magazine feature articles; researching free-lance markets. Prerequisites: JOUR 2500; major or minor status; junior standing.
JOUR	3250	Copy Editing	3.00	3.00	Fall, Spring. Theory and practice in editing local and wire news, headline writing, picture editing, evaluating news, layout and design, video display terminal operation. Prerequisites: JOUR 2500; major or minor status; junior standing. Extra fee.

JOUR	3300	Broadcast News	3.00	3.00	Fall. Techniques of writing, reporting and editing news for broadcast; rewriting wire copy; introduction to ENG shooting and editing techniques; preparation and use of television graphics. Student must provide own audio and video cassettes. Prerequisites: JOUR 2500; JOUR 3150; major or minor status; junior standing. Extra fee.
JOUR	3400	Principles of Public Relations	3.00	3.00	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	3.00	3.00	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	3.00	3.00	Fall. Planning and preparation for print and audio-visual public relations messages. Fundamentals of writing for publications including newsletters, house journals, pamphlets and brochures. Prerequisites: JOUR 2500 and JOUR 3400; major or minor status; junior standing.
JOUR	3450	Media Publication and Design	3.00	3.00	Fall, Spring. Theory and practice of editing functions and techniques in producing specialized publications: magazines, newsletters, newspapers and brochures for business and nonprofit organizations. Electronic typesetting and computer graphics. Prerequisites: JOUR 2500; major or minor status; junior standing. Extra fee.
JOUR	3850	Journalism in the Movies	3.00	3.00	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	1.00	3.00	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	1.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	Spring. Field practice in covering governmental and community affairs with attention both to general and specialized areas. Prerequisites: JOUR 3200; JOUR 3250, and JOUR 4000; major or minor status; junior standing.
JOUR	4300	Advanced Broadcast News	3.00	3.00	Spring. Writing, editing, producing and anchoring for broadcast. Emphasis on ENG shooting and editing, field reporting and studio production. Research on issues affecting broadcast journalists. Student must provide own videotape cassette. Prerequisites: JOUR 3300 and JOUR 4000; major or minor status; junior standing. Extra fee.
JOUR	4400	Public Relations Campaigns	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	Fall. Focus on the news media image of racial and ethnic minorities and the image of women and other underrepresented social groups. Exploration of the extent to which discrimination and prejudice function within news media industries in terms of employment opportunities and how news coverage perpetuates stereotypes of women, people of color and other underrepresented social groups. Open to nonmajors.
JOUR	4600	Online Journalism	3.00	3.00	Reporting, writing and editing news for interactive media, particularly the Internet. Special emphasis on the unique attributes of interactive media and how these attributes affect content. Usability, web design and HTML authoring. Prerequisites: JOUR 2500; major or minor status; junior standing.
JOUR	4650	American Journalism History	3.00	3.00	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	Perspectives on International Media	3.00	3.00	Spring. Social, economic and political factors, organization and control in the national news and informational systems of countries around the world. Open to nonmajors.
JOUR	4800	Special Problems in Journalism	1.00	3.00	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	3.00	3.00	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	1.00	3.00	Fall, Spring, Summer. Topics vary based on student and faculty interest and developments in the profession. May be repeated.
JOUR	4950	Specialized Journalism Issues	1.00	3.00	Fall, Spring, Summer. Topics vary based on student and faculty interest and developments in the profession. May be repeated. Approved for Distance Ed.

Subject: Kinesiology	Number	Long Course Title	Min Units	Max Units	Long Description
KNS	1160	Soccer	2.00	2.00	Fall, Spring.
KNS	1210	Tennis	1.00	1.00	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	2.00	2.00	Fall.
KNS	1240	Volleyball	2.00	2.00	Fall, Spring.
KNS	1370	Educational Dance	1.00	1.00	Fall. An introduction to the Movement Approach as a participant in educational dance. One two-hour laboratory.
KNS	1380	Educational Gymnastics	1.00	1.00	Fall. An introduction to the Movement Approach as a participant in educational gymnastics. One two-hour laboratory.
KNS	2020	Badminton	1.00	1.00	Fall, Spring.
KNS	2030	Basketball	1.00	1.00	Fall, Spring.
KNS	2040	Archery and Bowling	1.00	1.00	On demand. Skill development, analysis of motor performance and instructional strategies in archery and bowling. One two-hour laboratory. Extra fee.
KNS	2070	Fencing	1.00	1.00	On demand. Skill and knowledge development basic to participation and understanding of fencing. One two-hour laboratory. Extra fee.
KNS	2090	Golf	1.00	1.00	On demand. Skill and knowledge development basic to participation and understanding of golf. One two-hour laboratory. Extra fee.
KNS	2170	Softball	1.00	1.00	Fall.
KNS	2180	Swimming	1.00	1.00	Fall. Extra fee.
KNS	2240	Outdoor Leisure Pursuits	1.00	1.00	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	3.00	3.00	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	2.00	2.00	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	3.00	3.00	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	Advanced Performance and Content Development in Invasion Games	2.00	2.00	Fall. Skill/strategy development for advanced performance/understanding of invasion games and content progression. One 1-hour lecture/one 2-hour laboratory.
KNS	2330	Advanced Performance and Content Development in Net/Wall Games	2.00	2.00	Spring. Skill/strategy development for advanced performance/understanding of net/wall games and content progression. One 1-hour lecture/one 2-hour laboratory.
KNS	2340	Advanced Performance and Content Development in Field Games	1.00	1.00	Fall. Skill/strategy development for advanced performance/understanding of field games and content progression. One 2-hour laboratory.
KNS	2350	Professional Reading and Writing in Physical Education	1.00	1.00	On demand. Reading and interpretation of literature in physical education; writing professional paper; treatment of pertinent statistical techniques. Prerequisite: GSW 1120.
KNS	2380	Advanced Performance and Content Development in Educational Gymnastics	2.00	2.00	Spring. Advanced movement quality and content integration in educational gymnastics. One one-hour lecture, one two-hour laboratory. Prerequisite: KNS 1380. C/F hrs.: 30.
KNS	2410	Educational Games Teaching to Children	2.00	2.00	Fall. Movement approach to games/sports with special emphasis on program content, methodology and progression. One lecture, one laboratory. Prerequisite: KNS 1370, KNS 1380 or permission of instructor. C/F hrs.: 40.

KNS	2420	Human Movement in Early Childhood	2.00	2.00	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	2.00	2.00	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 Teaching Physical Education	3.00	3.00	Fall, Spring. Introduction to the teaching of early childhood-young adult physical education. Two one-hour lectures, one two-hour laboratory. Prerequisites: KNS 1370 or KNS 1380; Minimum score 22 ACT or 172 on 2 of 3 Praxis I tests. C/F hrs.: 32. Extra fee.
KNS	3120	Instructional Strategies in Physical Education	3.00	3.00	Fall, Spring, Summer. Developing and enhancing effective instructional strategies within physical education environments toward the teaching goal of developing skillful movers. Prerequisite: KNS 2470.
KNS	3130	Cardiopulmonary Resuscitation, First Aid, and Safety	2.00	2.00	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	1.00	1.00	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	1.00	1.00	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	2.00	2.00	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 of Coaching	3.00	3.00	Fall, Spring. Non-technical, off-the-field aspects of athletic coaching educational implications; coaching ethics; public relations; equipment; financing; liability; coach-athlete rapport.
KNS	3290	Coaching Football	3.00	3.00	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	2.00	2.00	Spring. Administration, organization, philosophy, theory, strategy, methods and responsibilities of coaching basketball. One lecture, two lab hours per week. Prerequisite: KNS 2030-Basketball.
KNS	3370	Advanced Performance and Content Development in Educational Dance	3.00	3.00	Spring. Advanced movement quality and content integration in educational dance. Two one-hour lectures, one two-hour laboratory. Prerequisites: KNS 1370, DANC 1010, and DANC 1020. C/F hrs.: 30.
KNS	3390	Coaching of Interscholastic Sports: A Practicum	2.00	2.00	Fall, Spring. Offers prospective coaches instruction in planning, teaching, administrative functions, safety, and liability essential to effective coaching. Taken during semester in which selected sport is in season. One lecture hour and arranged practicum hours. Prerequisites: KNS 3130 and KNS 3280.
KNS	3400	Motor Development Across the Lifespan	3.00	3.00	Fall. Changes in human movement over the lifespan and the theoretical and empirical reasons for those changes. Two one-hour lectures, one two-hour laboratory. Prerequisites: KNS 2300, PSYC 1010. Extra fee.
KNS	3500	Motor Learning	3.00	3.00	Spring. Principles/theories of learning and memory applied to motor skill acquisition. Emphasis on factors influencing and the development of successful instructional and training strategies. Two one-hour lectures, one two-hour laboratory. Prerequisites: KNS 2300, MATH 1120 or higher. Extra fee.
KNS	3550	Socio-cultural and Psychological Foundations of Teaching Physical Education	2.00	2.00	Fall. Socio-cultural and psychological foundations of physical education curriculum and instruction. Two, 1-hour lectures.

KNS	3560	Historical, Philosophical and Curricular Foundations of Physical Education	3.00	3.00	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	3.00	3.00	Fall, Spring. The immediate and long-range effects of exercise upon the human body. Two one-hour lectures, one two-hour laboratory. Prerequisites: BIOL 1040 or BIOL 2050; and BIOL 3320 or KNS 2300; and MATH 1120 or higher. Extra fee.
KNS	3610	Applied Exercise Physiology	3.00	3.00	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	3.00	3.00	Fall and Spring. Application of principles of mechanics to the study of human motion. Emphasis placed on theory and quantitative analysis. Two 1-hour lectures and one 2-hour laboratory. Prerequisites: KNS 2300 or BIOL 3310, and MATH 1120 or higher, and PHYS 1010 or PHYS 2010. Extra fee.
KNS	3870	Practicum	1.00	5.00	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	1.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	Fall. Selection, design, and application of exercise testing and exercise prescription principles. Three one-hour lectures. Prerequisite: KNS 3600. Extra fee.

KNS	4250	Exercise Testing and Prescription for Special Cases	3.00	3.00	Spring alternate years, Summers on demand. Overview of exercise testing, electrocardiogram (EKG) interpretation, and exercise prescription for monitoring exercisers with special conditions due to age or disease (e.g., cardiac disease and abnormalities, hypertension, obesity, diabetes, etc.). Three, 1-hour lectures. Prerequisite: KNS 4230 or permission of instructor.
KNS	4290	Sport Conditioning	3.00	3.00	Fall. Theory and application of biomechanical and physiological principles to the development of strength and conditioning programs for selected sports. Three one-hour lectures. Prerequisites: KNS 2300 and KNS 3600 or consent of instructor.
KNS	4320	Teaching-Learning Process in Early-Middle Childhood Physical Education	3.00	3.00	Fall, Spring. Refining the teaching-learning process in early-middle childhood physical education. Two 1-hour lectures/one 2-hour laboratory. Prerequisites: KNS 1370, KNS 1380, KNS 3120, and PETE Program Admission. Extra fee.
KNS	4330	Adapted Physical Activity	3.00	3.00	Fall, Spring. Principles, objectives, history and programming of adapted physical activity with an overview of disabilities in physical activity settings. Three one-hour lectures. Prerequisites: EDFI 3020 or EDFI 3030; and KNS 2470 or EDHD 2010 or RTD 2100. C/F hrs.: 28.
KNS	4400	Designing and Directing Exercise Programs	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	1.00	3.00	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	3.00	3.00	Fall, Spring. Refining the teaching-learning process in middle childhood-young adult physical education. Two 1-hour lectures/one 2-hour laboratory. Prerequisites: KNS 3120 and Admission to PETE Program.
KNS	4810	Senior Project	4.00	4.00	Fall, Spring, Summer. Culminating experience in study of human movement. Students work in groups to conceptualize, carry out and report a research project on topic within human movement science. Prerequisites: KNS 4000 and SM 2140 or consent of instructor.
KNS	4870	Practicum	1.00	5.00	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	15.00	15.00	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-Middle Childhood Physical Education Internship	1.00	16.00	Fall, Spring. Physical education teaching on full-day basis under supervision in early childhood-middle childhood schools. Prerequisites: full PETE program acceptance; 2.5 GPA; 90 semester hours; PSYC 1010; EDFI 3020; KNS 4320; KNS 4720; passing score on Praxis II Physical Education Content Knowledge. May be repeated. Extra fee.
KNS	4970	Middle Childhood-Young Adult Physical Education Internship	1.00	12.00	Fall, Spring. Physical education teaching on full-day basis under supervision in middle childhood-young adult schools and an on-campus seminar. Prerequisites: full PETE program acceptance; 2.5 GPA; 90 semester hours; PSYC 1010; EDFI 3020; KNS 4320; KNS 4720; passing score on Praxis II Physical Education Content Knowledge. May be repeated. Extra fee.

Subject: Latin	Number	Long Course Title	Min Units	Max Units	Long Description
LAT	1010	Elementary Latin I	4.00	4.00	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	4.00	4.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	Developing increased ability to understand structural peculiarities of classical Latin. Prerequisite: LAT 2020.
LAT	3520	Latin Prose Composition II	3.00	3.00	Developing increased ability to understand structural peculiarities of classical Latin. Prerequisite: LAT 3510.
LAT	3610	Latin Literature I	3.00	3.00	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	3.00	3.00	Spring. Grammatical review and advanced reading of ancient Latin texts. Prerequisite: LAT 2020 or consent or section leader and instructor.
LAT	4510	Advanced Latin Prose Composition	3.00	3.00	On demand. Development of written skills at an advanced level. Advanced review of Latin grammar and syntax; study of English vs. Latin idioms and of influence of genre on style. Prerequisite: LAT 3510.
LAT	4700	Readings in Latin Literature	1.00	3.00	On Demand. Advanced reading for students wishing to study special period or great author. Prerequisites: LAT 3620 or consent of Classical Studies section leader and instructor. May be repeated with different topics up to 6 credits.

Subject: Legal Studies	Number	Long Course Title	Min Units	Max Units	Long Description
LEGS	1900	Ethics and Responsibility in Business	3.00	3.00	An introduction to current ethical issues as applied to business. Examination of the ethical dilemmas, failures, successes in contemporary American business; differences between law and ethics; the social responsibility of business; other current topics in business ethics.
LEGS	3010	Legal Environment of Business	3.00	3.00	Fall, Spring, Summer. Fundamentals of the structure of the American legal system, contracts, torts, ethics and social responsibility of business, property, and selected topics related to the legal environment in which businesses operate. Credit not allowed for both LEGS 3010 and LEGS 4010. Prerequisite: junior standing.
LEGS	3040	Law for Entrepreneurs	3.00	3.00	Legal issues related to new business ventures including the choice of entity, financing issues, contracts, employment, intellectual property, potential areas of liability, and methods of sale of the business. Prerequisite: BA 2040.
LEGS	3050	Comparative Legal Philosophy	3.00	3.00	Spring. Legal philosophy and comparative law using legal systems of Western, Communist and developing countries as models; treatment of commercial obligations and constitutional rights within different legal systems.
LEGS	4010	Business Law I	4.00	4.00	Fall. Business law including study of contracts, sales, secured transactions, negotiable instruments, bankruptcy and suretyship. No credit for students who have taken LEGS 3010. Recommended for accounting students planning on taking the CPA examination.

LEGS	4020	Business Law II	4.00	4.00	Spring. Business law including accountant legal liability, agency, partnerships, corporations, securities, property, bailments, trusts and wills, insurance, and professional responsibility. Prerequisite: LEGS 3010 or LEGS 4010. Recommended for accounting students planning on taking the CPA examination.
LEGS	4060	International Business Transactions	3.00	3.00	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	3.00	3.00	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	Employment Law I	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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 II	3.00	3.00	Spring. Discussion of laws focusing on the prohibition of discrimination and harassment on the basis of race, color, national origin, sex, religion, age and handicap, and veterans; and on wage and salary discrimination using equal pay and comparable worth analysis. Prerequisite: junior standing.

LEGS	4310	Environmental Law	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	1.00	3.00	On demand. In-depth study of selected areas of law. Offered to individual or to small groups of students on a lecture, seminar, or independent study basis, depending on student need and nature of material. May be repeated to six hours. Prerequisite: consent of chair of department and instructor.

Subject: University Libraries	Number	Long Course Title	Min Units	Max Units	Long Description
LIB	1120	Living in the Information Age	3.00	3.00	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	1.00	1.00	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	2.00	2.00	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	3.00	3.00	Online. Fall, Spring and Summer. Examination of interdisciplinary topics in the context of identifying, evaluating, synthesizing, and ethically using information. Critical analysis of and discussions about issues related to the information age and how these issues have an impact on higher education and the work place. Prerequisite: Successful completion of GSW 1120.

Subject: Mathematics & Statistics	Number	Long Course Title	Min Units	Max Units	Long Description
MATH	90	Elementary Algebra	3.00	3.00	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.
MATH	95	Intermediate Algebra	3.00	3.00	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.
MATH	1150	Introduction to Statistics	3.00	3.00	Fall, Spring, Summer. Description of data, binomial and normal distributions, estimation and testing hypotheses for means and proportions. Prerequisites: Two years high school algebra, one year of geometry and a satisfactory placement exam score.
MATH	1160	Introduction to Statistics II	3.00	3.00	MATH 1150 continued. Nonparametric methods, linear regression and correlation, analysis of variance. Prerequisite: grade of C or higher in MATH 1150 or consent of instructor.
MATH	1200	College Algebra	5.00	5.00	Fall, Spring, Summer. Polynomials, factoring, rational exponents, linear and quadratic equations and inequalities, applications; polynomial, exponential and logarithmic functions and their graphs, systems of equations, theory of equations. Not to be taken if credit for MATH 1280 or MATH 1300 has been received. No more than 6 credit hours in MATH 1120, MATH 1200, and MATH 1220 may be counted toward graduation. Prerequisites: Two years of high school algebra, one year of geometry and a satisfactory placement exam score. or grade of C or higher in MATH 95.

MATH	1210	College Algebra I	3.00	3.00	Fall, Spring, Summer. Graphing, algebra, functions and their graphs, factoring, polynomials, rational expressions, rational exponents, linear and quadratic functions and their applications. Not open to students with a grade of C or higher in MATH 1200, MATH 1220, MATH 1280, or MATH 1300. No more than 6 credit hours in MATH 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	3.00	3.00	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 1120, MATH 1200, and MATH 1220 may be counted toward graduation. Prerequisites: Two years of high school algebra, one year of geometry and a satisfactory placement exam score, or grade of C or higher in MATH 1120, or grade of D in MATH 1200.
MATH	1230	Mathematics for Architecture/Construct	4.00	4.00	Fall, Spring. Units and unit conversions; geometry; trigonometry of angles; laws of cosines and sines; solving triangles; vectors; conceptual introduction to differential and integral calculus. This course is specifically designed to prepare students for required courses in the Architecture and Construction Management programs. Prerequisite: Grade of C or higher in MATH 1200 or MATH 1220, or satisfactory placement exam score.
MATH	1260	Basic Calculus	5.00	5.00	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	5.00	5.00	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	2.00	2.00	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	Precalculus Mathematics	3.00	3.00	Fall, Spring. Theory of equations, coordinate geometry, exponential, logarithmic and trigonometric functions, applications. Overlaps with content of MATH 1280 and MATH 1290. Not to be taken if credit for MATH 1280 or MATH 1290 has been received. Prerequisites: two years of high school algebra, one year of high school geometry and a satisfactory placement exam score, or grade of C or higher in MATH 1200 or MATH 1220.
MATH	1310	Calculus and Analytic Geometry	5.00	5.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	Fall, Spring. Numeration systems and number sense. Development of the whole numbers, integers, rationals and real numbers. Notions of fractions, decimals, percents, ratio and proportion from an applied perspective. Measurement of geometric figures. Open only to education majors. Prerequisite: satisfactory score on MATH 2130 placement test or grade of C or better in MATH 90.
MATH	2150	Number Systems for Middle School Teachers	3.00	3.00	Fall, Spring. Integers, rationals, irrationals, decimals, real and complex number systems. Properties of numbers. Number theory. Proportional reasoning. Percents. Relations and functions. Algebra. Set theory. Tables and graphs. Open only to education majors. Prerequisite: satisfactory score on MATH 2150 placement test or grade of C or better in MATH 90.
MATH	2160	Geometry for Middle School Teachers	3.00	3.00	Fall, Spring. Informal geometry in two- and three-dimensions. Measurement. Symmetry. Transformational geometry. Tessellations. Congruence and similarity. Coordinate geometry. Constructions. Conic sections. Geometer's Sketchpad. Open only to education majors. Prerequisite: C or better in MATH 2150.
MATH	2220	Discrete Mathematics	3.00	3.00	Fall, Spring. Logic, methods of proof, introduction to set theory, relations, functions, algorithms, counting techniques, graph theory, and trees. Credit not given for both MATH 2220 and MATH 3220. Prerequisite: C or better in MATH 1260, MATH 1310, or MATH 1350. The web-based section is open only to Computer Science students.
MATH	2320	Calculus and Analytic Geometry II	5.00	5.00	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	3.00	3.00	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	1.00	1.00	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	4.00	4.00	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	3.00	3.00	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	3.00	3.00	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	1.00	1.00	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	3.00	3.00	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	3.00	3.00	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	3320	Elementary Linear Algebra	3.00	3.00	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	3.00	3.00	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	3.00	3.00	Fall, Spring. Elementary topics from rings, fields and groups: divisibility properties of the integers; integral domains; construction of the rational, real and complex number systems; polynomial rings. MATH 3390 should not be used as an elective for students in the College of Arts and Sciences. Prerequisite: C or better in MATH 3220 and MATH 3320 or consent of instructor.
MATH	3410	Principles of Probability and Statistics	3.00	3.00	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	3.00	3.00	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	1.00	1.00	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	3.00	3.00	Selected topics in mathematics not included in existing courses. May be taken twice for credit. Prerequisite: consent of instructor.
MATH	4010	Number Theory	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	Fall, Spring. History of Mathematics through Calculus. Prerequisite or corequisite: MATH 3320.
MATH	4140	Algebraic Thinking and Misconceptions	3.00	3.00	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	3.00	3.00	Fall, Spring. History of mathematics, direct and indirect proof, induction, mathematical systems, binary operations, finite geometries, non-Euclidean geometry. Open only to middle school education majors. Prerequisites: C or better in MATH 2150 and MATH 2160, and in either MATH 2220 or MATH 3220, and in one of MATH 2450, MATH 2470, or MATH 3410, or consent of instructor.
MATH	4170	Advanced Mathematics Topics for Early Adulthood Teachers	3.00	3.00	Fall, Spring. Topics from the middle and secondary school mathematics curricula presented from an advanced point of view. Topics include the development of various number systems, the meaning of area, the fundamental theorem of calculus, infinite cardinalities and classical problems of geometry. History of mathematics integrated into course. Prerequisites: C or better in MATH 3320 and MATH 3390. Corequisite: EDTL 4740 or consent of instructor.
MATH	4210	Foundations of Mathematics	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	1.00	3.00	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	1.00	4.00	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	1.00	1.00	Directed study in some field of mathematics; preparation and presentation of research topic. To be taken concurrently with two or more hours of MATH 4700. Prerequisite: invitation of department.

Subject: Materials Science	Number	Long Course Title	Min Units	Max Units	Long Description
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MATS	1000	Materials in the Service of Society	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	1.00	3.00	On demand. Research in materials science; projects chosen in consultation with adviser and will include library and laboratory work. May be repeated. Prerequisite: consent of instructor.

Subject: Medical Technology	Number	Long Course Title	Min Units	Max Units	Long Description
MEDT	1010	Introduction to Health Professions	1.00	1.00	Survey of health and human service professions and the function of health care personnel within these professions.
MEDT	2010	Orientation to the Professions of Medicine/Medical Technology	2.00	2.00	Spring. Professional aspects of medical technology and the allied health fields; introduction to laboratory procedures and topics concerning direct and indirect patient care; tour of hospital facilities; review of current clinical practice issues. Time: one hour lecture and two-hour laboratory/discussion session per week.
MEDT	2050	Acquired Immunodeficiency Syndrome	1.00	1.00	Fall, Spring. A comprehensive course on HIV/AIDS, discussing epidemiology, biology, socio-demography, safer sex, other sexually transmitted diseases, partner notification, ethics, testing and support services. Bowling Green faculty as well as community experts will be brought in as instructors. This course will be informative and practical.

MEDT	2220	Basic Hematology	3.00	3.00	Study of human blood cell structure and function, methods of blood cell analysis, and changes caused by diseases. Lecture and laboratory.
MEDT	2510	Analysis of Body Fluids	2.00	2.00	Formation and function of the human urinary system. Methods of chemical and cellular analysis of urine, amniotic, cerebrospinal, serous, synovial and seminal fluids. Changes in body fluids caused by diseases. Lecture and laboratory.
MEDT	3010	Medical Terminology	2.00	2.00	Fall, Spring. Vocabulary and terms used by medical personnel; prefixes, suffixes, word roots and their combining forms, usage and spelling; specialized terms by body systems. Prerequisite: sophomore standing.
MEDT	3100	Forensic Laboratory Testing	3.00	3.00	Introduction to general forensic testing as employed in clinical medicine, criminal justice, etc. Theory & demonstration include specimen collection, preservation; DNA testing; species identification, drug testing, court application, case studies. Explained in format geared to non-science majors. Lecture 2hr & 1hr discussion/demo/week. Extra fee.
MEDT	3800	AIDS Education in the Schools	2.00	2.00	Review of current legislation, policies, procedures, educational materials and safety regarding AIDS/HIV in the classroom with emphasis on responsibilities of teachers, administrators, school board.
MEDT	4010	Issues in Health Care Administration	3.00	3.00	Capstone course examining current issues and trends affecting the health care delivery system and confronting health providers, patients and society. Interdisciplinary topics such as health care economics, quality of care, law and ethics and governmental policies will be emphasized. Prerequisite: Senior in AHS or BSBA, or junior in Medical Technology Program or consent of instructor.
MEDT	4020	Orientation and Management	1.00	1.00	Orientation to hospital departments and laboratory procedures. Laboratory supervision and management. Prerequisite: admission to hospital-based medical technology program. Duration of this course may vary slightly from hospital to hospital.
MEDT	4030	Applied Clinical Microbiology	9.00	9.00	Fourteen weeks of supervised practical experience in a clinical microbiology lab identifying pathogenic bacteria, fungi, and parasites. Prerequisite: admission to hospital-based medical technology program. Duration of this course may vary slightly from hospital to hospital.

MEDT	4040	Clinical Serology	2.00	2.00	Three weeks of supervised experience in clinical applications of cellular and humoral immunity as diagnostic procedures. Prerequisite: admission to hospital-based medical technology program. Duration of this course may vary slightly from hospital to hospital.
MEDT	4050	Applied Clinical Hematology	5.00	5.00	Eight weeks of supervised practical experience in hematologic methods, coagulation and blood cell morphology in a hospital laboratory setting. Prerequisite: admission to hospital-based medical technology program. Duration of this course may vary slightly from hospital to hospital.
MEDT	4060	Applied Clinical Chemistry	11.00	11.00	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.
MEDT	4070	Blood Bank	5.00	5.00	Seven weeks of supervised practical experience in blood group serology with emphasis on preparation and testing of blood for transfusion in a hospital laboratory setting. Prerequisite: admission to hospital-based medical technology program. Duration of this course may vary slightly from hospital to hospital.
MEDT	4110	Diagnostic Immunology I	3.00	3.00	Theory of clinical immunology related to humoral and cellular immunity in health and disease states. Prerequisite: admission to university-based medical technology program or permission of instructor.
MEDT	4120	Diagnostic Immunology I Laboratory	1.00	1.00	Laboratory application and testing related to humoral and cellular immunity in disease states. Prerequisite: admission to university-based medical technology program or permission of instructor. Extra fee.
MEDT	4130	Immunoematology I	4.00	4.00	Theory of human blood groups, compatibility testing, detection and identification of antibodies, blood collection/storage, management of transfusion service. Prerequisites: admission to university-based medical technology program or permission of instructor.
MEDT	4140	Immunoematology I Laboratory	2.00	2.00	Laboratory application and testing of human blood groups, compatibility testing, detection and identification of antibodies. Prerequisite: admission to university-based medical technology program or permission of instructor. Extra fee.

MEDT	4150	Immunohematology II	3.00	3.00	MEDT 4130 and MEDT 4140 continued; emphasis on a clinical application of current practice in Blood Banking. Prerequisites: MEDT 4130 and MEDT 4140 with a grade of C or better. Duration of this course may vary slightly from hospital to hospital. Extra fee.
MEDT	4160	Clinical Immunology II	2.00	2.00	Clinical laboratory experience regarding testing and application of diagnostic immunology (MEDT 4110 and MEDT 4120). Prerequisites: grade of C or higher in MEDT 4110 and MEDT 4120 or equivalent. Duration of this course may vary slightly from hospital to hospital. Extra fee.
MEDT	4210	Hematology I	3.00	3.00	Origin, regulation, morphology and function of blood cells in health and disease. Congenital and acquired hematologic aberrations. Prerequisite: admission to university-based medical technology program or permission of instructor.
MEDT	4220	Hematology Lab I	2.00	2.00	Diagnostic laboratory procedures applied to qualitative and quantitative evaluation of blood cells. Prerequisite: admission to university-based medical technology program or permission of instructor. Extra fee.
MEDT	4230	Hematology II	2.00	2.00	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.
MEDT	4240	Hematology III	3.00	3.00	Continuation of Phase I hematology sequence with emphasis on clinical application and hospital laboratory instrumentation. Full-time clinical instruction and practice. Prerequisites: grade of C or better in MEDT 4210; MEDT 4220 or MEDT 4600; and MEDT 4230. Duration of this course may vary slightly from hospital to hospital. Extra fee.
MEDT	4310	Clinical Bacteriology I	3.00	3.00	Isolation identification and detailed description of clinically important bacteria. Microbial etiology of disease; methods of prevention and control. Prerequisites: admission to university-based medical technology program or permission of instructor.
MEDT	4320	Clinical Bacteriology I Laboratory	2.00	2.00	Diagnostic microbiology laboratory procedures. Methods of isolation and identification of clinically significant bacteria. Prerequisite: admission to university-based medical technology program or permission of instructor. Extra fee.

MEDT	4330	Clinical Bacteriology II	4.00	4.00	MEDT 4310 and MEDT 4320 continued; emphasis on clinical application and identification of clinically significant bacteria. Full-time clinical instruction and practice. Prerequisites: grade of C or better in MEDT 4310, MEDT 4320, MEDT 4340 or equivalent, MEDT 4350 and MEDT 4360. Duration of this course may vary slightly from hospital to hospital. Extra fee.
MEDT	4340	Clinical Parasitology	3.00	3.00	Parasitic diseases of man; methods of detection, isolation and identification of clinically significant human parasites. Lecture and lab. Prerequisite: BIOL 3130 or equivalent or permission of instructor. Extra fee.
MEDT	4350	Clinical Mycology	2.00	2.00	Clinically significant fungi; methods of detection, isolation and identification. Lecture and lab. Prerequisite: BIOL 3130 or equivalent or permission of instructor. Extra fee.
MEDT	4360	Clinical Virology	1.00	1.00	Study of clinically important human viruses, emphasizing structure, classification and pathogenicity. Methods of isolation, identification, prevention and vaccination will also be discussed. Prerequisite: BIOL 3130 or equivalent. Corequisites: MEDT 4310 and MEDT 4320 or permission of instructor.
MEDT	4410	Clinical Chemistry I	4.00	4.00	Theoretical principles of analysis of chemical constituents of blood and body fluids in normal and disease states. Prerequisite: admission to university-based medical technology program or permission of instructor.
MEDT	4420	Clinical Chemistry I Laboratory	2.00	2.00	Methods, instrumentation and techniques of clinical chemistry through experiments, problems and demonstrations. Prerequisite: admission to university-based medical technology program or permission of instructor. Extra fee.
MEDT	4430	Clinical Chemistry II	5.00	5.00	Continuation of MEDT 4410 and MEDT 4420; emphasis on clinical application. Prerequisites: grade of C or better in MEDT 4410; MEDT 4420; and MEDT 4510 or MEDT 4600. Duration of this course may vary slightly from hospital to hospital. Extra fee.
MEDT	4500	Emerging Infectious Diseases	3.00	3.00	Fall. Provides an overview of new and reemerging viral, bacterial and parasitic infections facing the Nation in the 21st Century. Emphasizes the clinical manifestations of these infectious diseases, global changes that contribute to emerging diseases, prevention strategies and public health's response to epidemics.

MEDT	4510	Analysis of Body Fluids	2.00	2.00	Physiology of urinary system and related diseases. Methods of detection of chemical and cellular elements of urine, cerebrospinal fluid, amniotic fluid, and other body fluids. Lecture and laboratory. Prerequisite: admission to university-based medical technology program or permission of instructor. Extra fee.
MEDT	4600	Medical Laboratory Technician Bridge Course	1.00	3.00	Basic theory, problem solving, troubleshooting, correlation between laboratory data and disease states, and other advanced concepts in clinical laboratory sciences. Lecture and laboratory. May be repeated. Prerequisite: Admission to professional training.
MEDT	4650	Laboratory Management and Education	1.00	1.00	Laboratory supervision and management; principles of education and laboratory instruction; seminars or case histories on selected topics of clinical interest. Prerequisite: completion of pre-clinical MEDT courses or permission of instructor. Duration of this course may vary slightly from hospital to hospital.
MEDT	4700	Research and Special Topics	1.00	3.00	Research techniques, literature search, experimental design, critical reading. Paper required on selected problem. Prerequisite: permission of instructor. May be repeated to 3 hours.
MEDT	4800	Introduction to Clinical Research	1.00	3.00	Research techniques, literature search, experimental design. Term paper required. For university-based students during clinical training at clinical site. Prerequisites: completion of pre-clinical courses. Duration of this course may vary slightly from hospital to hospital. Extra fee.

Subject: Manufacturing Technology	Number	Long Course Title	Min Units	Max Units	Long Description
MFG	1260	Basic Metrology	1.00	1.00	Linear measurement instruments, gauge blocks, dial indicators, angular measurement, calibration. One hour lecture.
MFG	2250	Plastic Materials and Processes	3.00	3.00	Identification, properties, characteristics and selection of plastic materials. Set-up and operation of plastic processing equipment. Two hours lecture and two hours laboratory. Prerequisite: MFG 1120 or QS 2650 or permission by instructor. Offered at Firelands only.

MFG	2270	Quality Assurance	3.00	3.00	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	3.00	3.00	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	1.00	3.00	For advanced students wanting to conduct intensive study of selected problems in manufacturing technology. May be repeated up to 6 hours if topics vary. Prerequisites: sophomore standing and consent of instructor.
MFG	3220	Non-Metallic Materials and Processes I	3.00	3.00	Spring. Wood, reconstructed wood and ceramic materials, processing methods and product applications. One two-hour lecture and one two-hour laboratory. Extra fee.

Subject: Management	Number	Long Course Title	Min Units	Max Units	Long Description
MGMT	3000	Integrated Operations and Supply Chain Management	3.00	3.00	Fall, Spring, Summer. An integrated view of how supply management, operations, and logistics functions create value for customers. Concepts studied include: design of operations and supply chain strategies, systems, and processes; coordination and control of material and information flows; and decision-making tools for supply chain management and integration with other business functions. Prerequisite: STAT 2120 or STAT 2200, or equivalent.
MGMT	3040	Entrepreneurial Leadership and Teams	3.00	3.00	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	3.00	3.00	Fall, Spring, Summer. Fundamentals of organization theory; objectives, policies, decision-making, authority, management development, leadership, communication, motivation and effective human relations; management principles. No credit allowed toward BSBA degree. Prerequisite: junior standing or permission of department.

MGMT	3300	Supply Management I	3.00	3.00	Fall, Spring, Summer. This course provides an overview of the supply function and explores the steps of the supply management cycle. Topics include the purchasing/procurement procedures and policy, supply organization, specifications and statement of work development, sourcing strategy, supplier evaluation, global sourcing, competitive bidding, price/cost analysis, e-procurement, and socially responsible supply management. Prerequisite: MGMT 3000 (concurrent registration in MGMT 3000 permitted).
MGMT	3600	Organizational Theory and Behavior	3.00	3.00	Fall, Spring, Summer. Microrelationships in organizations; historical perspective, changing nature of organizations, and individual and overall group behavior. Specific topics include motivation, decision-making, leadership, group dynamics and organization structure. Prerequisite: STAT 2110 or STAT 2200 or equivalent.
MGMT	3610	Human Resource Management	3.00	3.00	Fall, Spring, Summer. Survey of HRM activities including job analysis, performance appraisal, job evaluation, wage surveys, compensation and benefits, labor relations, health and safety, and relevant government regulations. Prerequisite: MGMT 3050 or MGMT 3600.
MGMT	4410	Quality Management and Lean Tools	3.00	3.00	Fall, Spring. Fundamentals of the Six Sigma quality methodology and lean philosophies applied to the management of manufacturing and service organizations. Topics include Six Sigma, statistical process control, quality function deployment, process capability, reliability, just-in-time, and lean manufacturing. Prerequisite: C or better in MGMT 3000.
MGMT	4420	Logistics Management for Supply Chains	3.00	3.00	Fall, Spring. Overview of the logistics function in a global supply chain. Topics include global supply chains, information networks and enterprise resource systems, independent demand inventory systems, transportation infrastructure and rates, warehousing, packaging, and facility location. Prerequisite: C or better in MGMT 3000.
MGMT	4450	Operations Planning and Control	3.00	3.00	Fall, Spring. Topics include forecasting, sales and operation planning, master scheduling and materials requirements planning. Specific emphasis placed on the concepts of flow and capacity within operations systems and the supply chain. Prerequisite: C or better in MGMT 3000.

MGMT	4470	Supply Management II	3.00	3.00	Fall, Spring. The purpose of the course is to enable students to analyze price and costs, to understand total cost of ownership models, and to plan for and conduct purchasing negotiations. Supplier relationships, contract management, and legal considerations in supply management are also covered. Prerequisite: MGMT 3300 and C or better in MGMT 3000.
MGMT	4480	Advanced Supply Chain Planning	3.00	3.00	Fall, Spring. The objective of this course is to examine the complexities of process design, planning, and managing information flows in a lean supply chain. Topics include collaborative forecasting, planning, and replenishment; demand management; replanning; operations scheduling; value stream mapping; lean supply chain principles; supply chain information systems; and project management. Prerequisites: MGMT 4420, MGMT 4450, and admission to the Supply Chain Management specialization.
MGMT	4490	Supply Chain Strategy	3.00	3.00	Fall, Spring. The objective of this course is to integrate principles, theories, and techniques in supply management, operations, and logistics for the effective supply chain management in a global environment. Topics include design of global supply chains, supply chain structure, and relationships with supply chain members. Prerequisites: MGMT 4410, MGMT 4470, MGMT 4480 and admission to the Supply Chain Management specialization. Concurrent registration in MGMT 4470 and MGMT 4480 permitted.
MGMT	4540	Advanced Topics in Human Resources Management	3.00	3.00	Fall, Spring. Focuses on how human resource (HR) efforts help organizations select, motivate, and develop employees. Topics include employee selection, compensation, training and development, and managing organizational change. Ethics, measurement, strategic HR, and globalization will be discussed throughout the course. Prerequisite: MGMT 3610.
MGMT	4560	Managing Productivity, Employee Involvement and Reward Systems	3.00	3.00	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	3.00	3.00	Fall. Examination of topics related to organization development and change including diagnosing the need for change, overcoming resistance to change, implementing and evaluating interventions, and confronting the ethical dilemmas of change. Prerequisite: MGMT 3050 or MGMT 3600.

MGMT	4700	Leading for Success	3.00	3.00	Fall, Spring. Uses theories, principles, and practices from organizational behavior to develop competencies for leading and managing individuals, teams and organizations; emphasizes ethical and social responsibilities; utilizes experiential learning; serves as capstone course in the Management Specialization. Prerequisites: admission to specialization and MGMT 3610, MGMT 4540, and MGMT 4650. Concurrent registration in MGMT 4540 permitted.
MGMT	4910	Studies in Management	1.00	3.00	On demand. Selected areas not covered by existing courses but which are developing rapidly as important parts of discipline. Offered to individual on lecture basis or in seminar, depending on student need and course content. May be repeated to six hours.

Subject: Management Information Systems	Number	Long Course Title	Min Units	Max Units	Long Description
MIS	2000	Introduction to Management Information Systems	3.00	3.00	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	3.00	3.00	Design of business applications in Windows environment. Focus on developing database front-ends and integration of spreadsheets, databases, and other productivity applications. Visual programming languages such as Visual Basic used as development environment. Prerequisites: MIS 2000 and CS 2010.
MIS	4050	Electronic Commerce	3.00	3.00	Management strategies, challenges and issues in the domain of electronic commerce. Impact on global competition and society. Role of Internet-based technologies in accelerating electronic commerce. New business opportunities and skills needed to exploit them. Prerequisite: MIS 2000 or CS 1000 or approval of department. Extra fee.
MIS	4170	Microcomputer Hardware and Software Management	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	Logical database design and effective implementation, including hierarchical, network and relational models. Prerequisites: MIS 2000 and CS 2010.
MIS	4500	Business Process Management with SAP	3.00	3.00	Business processes and integration of business processes to achieve business goals. This course will use SAP software product as a tool to illustrate business process integration. Prerequisites: MIS 2000 and ACCT 2210.
MIS	4710	Systems Analysis and Design	3.00	3.00	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	3.00	3.00	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	1.00	3.00	To be completed at first opportunity following suitable internship experience. Work experience to be preceded by at least 70 hours of academic credit . No credit for students with other internship credit in College of Business Administration. No credit toward the MIS specialization within the BSBA program or the MIS minor. Graded S/U.
MIS	4910	Studies in Management Information Systems	1.00	3.00	On demand. Selected areas or contemporary problems. May be repeated to six hours. May be offered individually as well as in classes, depending upon student needs and nature of material. Prerequisite: approval of department.

Subject: Marketing	Number	Long Course Title	Min Units	Max Units	Long Description
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MKT	3000	Principles of Marketing for Non-Business Majors	3.00	3.00	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 3010. Extra fee. Approved for distance education.
MKT	3010	Introduction to Marketing Management	3.00	3.00	Fall, Spring, Summer. A strong foundation in the marketing process, including a definition, the principles, and an exploration of strategies. How the marketing of goods and/or services serves the mission and fits into the larger strategic, business, operational and budget plans and goals of an organization. Specific topics include branding, market research, buyer behavior, segmentation, advertising, selling, distribution and pricing. Designed for BSBA students. Prerequisite: ECON 2020 and ACCT 2210. Extra fee.
MKT	3020	Consumer Behavior	3.00	3.00	Fall, Spring. Pertinent theoretical and empirical findings about consumer markets and behavior, implications for marketing practice. Topics include: processes of decision making and evaluation; personal, social, environmental, and marketing influences; attitude formation and change; information processing and learning; segmentation of markets. Prerequisite: C or better in MKT 3000 or MKT 3010.
MKT	3200	Marketing Research	3.00	3.00	Fall, Spring. Research as a process and source of information for marketing decision making. Examines research methods and techniques used in the collection, analysis, and interpretation of primary and secondary data for consumer and business marketing. Prerequisites: C or better in STAT 2120 or STAT 2200 or equivalent, and C or better in MKT 3000 or MKT 3010.
MKT	3500	Business-to-Business Marketing	3.00	3.00	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 3000 or MKT 3010.

MKT	4000	Topics in Marketing	1.00	3.00	On demand. Selected areas not covered in depth by existing courses but which are developing as an important part of marketing. Offered on lecture basis or in seminar, depending on student demand and course content. Typical topics, which may vary from semester to semester, could include nonprofit marketing; demand analysis and forecasting; distribution systems; or pricing strategies. May be repeated to 6 hours. Prerequisites: depending upon course content, prerequisites in addition to C or better in MKT 3000 or MKT 3010 may be required.
MKT	4050	Services Marketing	3.00	3.00	Fall, Spring. Conceptual and analytic framework for the application of marketing principles to the service sector of the economy. Development and understanding of the impact of unique service characteristics on the development of marketing strategies. Prerequisite: C or better in MKT 3000 or MKT 3010.
MKT	4080	Introduction to Promotion	3.00	3.00	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	3.00	3.00	Fall, Spring. Role of promotion in marketing process. Applications of consumer behavior theory to promotional mix (advertising, personal selling, sales promotion, public relations) and other marketing communications. Topics include integrated marketing communications, communication theory, promotional planning, creation, execution and evaluation. Credit not allowed for both MKT 4080 and MKT 4100. Prerequisite: C or better in MKT 3020.
MKT	4120	Advertising Management	3.00	3.00	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	3.00	3.00	Fall, Spring. Explores the unique problems and issues that occur within service firms as they attempt to develop effective service marketing strategies and manage the service encounter. Topics include: internal marketing; service provider roles; service failure and recovery strategies; management of service quality; server provider management. Prerequisite: C or better in MKT 4050 and MKT 3000 or MKT 3010.
MKT	4160	Servicescape Design	3.00	3.00	Fall, Spring. Explores the unique managerial problems and decisions that occur within a service encounter due to the interaction of people (provider and client) and their physical environment. Covers four basic areas of the elements of physical evidence: exterior, interior, support materials and people. Prerequisite: C or better in MKT 3000 or MKT 3010. Recommended: MKT 4050.
MKT	4210	Advanced Marketing Research	3.00	3.00	On demand. Application of research methods and techniques to solve marketing problems. Research design, implementation, interpretation of results, reporting. Topics include: advanced study of sampling; questionnaire design; data collection and retrieval; data analysis; presentation of results. Prerequisite: C or better in MKT 3200.
MKT	4250	Creativity in Marketing	3.00	3.00	Fall, Spring. An exploration of the role of creative expression in marketing thought and practice. Topics include: individual and group creativity, the creative problem-solving process, creativity assessment, idea generation theory, the application of problem-solving frameworks to the development of creative marketing strategy. Prerequisite: C or better in MKT 3000 or MKT 3010.
MKT	4300	Retail Management	3.00	3.00	Fall or Spring. Retailing is the study of companies involved in and the process of selling products to final consumer. Topics include: store location and trade area analysis; retail financial control; inventory planning; buying; merchandising; store layout; retail promotion. Prerequisite: C or better in MKT 3000 or MKT 3010. Recommended: ACCT 2000 or ACCT 2210.

MKT	4350	Marketing on the Internet	3.00	3.00	Fall, Spring. Application of basic principles associated with marketing goods and services on the Internet. Emphasis on the dynamic way in which the Internet impacts all elements of an organization's marketing strategy, including advertising, selling, distribution, pricing, and the product itself. Prerequisite: C or better in MKT 3000.
MKT	4400	Professional Selling	3.00	3.00	Fall, Spring. The selling process is studied from a theory, techniques and application perspective. Topics include: behavioral aspects of sales; prospecting; qualifying; approaching; presenting; handling objections; closing; follow-up; and other special interest topics. Sales presentation is required for all students. Prerequisite: C or better in MKT 3000 or MKT 3010.
MKT	4420	Sales Management	3.00	3.00	Fall or Spring. Theory, principles and practices of selling and sales force administration for manufacturing and wholesaling enterprises. Topics include: recruiting; training; compensation; sales force size and design; selling techniques; performance appraisal. Prerequisite: C or better in MKT 3000 or MKT 3010.
MKT	4450	Product Planning	3.00	3.00	On demand. Issues and concepts related to planning, development, management and analysis of products. Emphasis on role of new products in corporate strategy; process, organization, research and oversight of new product development and management of existing products. Prerequisite: C or better in MKT 3000 or MKT 3010.
MKT	4550	International Marketing	3.00	3.00	Fall or Spring. Theory and practice of marketing across national borders, as well as marketing within different foreign environments, highlighting the similarities and differences among various countries and regions. Special attention to the marketing structure and strategies of global corporations. Prerequisite: C or better in MKT 3000 or MKT 3010.
MKT	4600	Marketing Management	3.00	3.00	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	1.00	3.00	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	1.00	3.00	Fall, Spring. Independent or small group study of selected topics not covered by existing courses but which are currently (or becoming) an important part of marketing. Prerequisite: permission of department chair. Graded S/U.

Subject: Military Science & Leadership					
	Number	Long Course Title	Min Units	Max Units	Long Description
MSL	1000	Lifetime Leadership Skills	2.00	2.00	Skills needed to be successful in wide range of environments to include academic, corporate and military. Subjects include but not limited to time management, memory comprehension, effective and efficient reading and effective note taking. Extensive leadership studies of both corporate and military settings focuses on interpersonal skills, professional ethics and officership. No military obligation or prerequisites. Extra fee.
MSL	1010	ROTC and the National Defense Organization	2.00	2.00	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	2.00	2.00	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	2.00	2.00	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	3.00	3.00	Professionalism and leadership required of the U.S. Army Officer; application of leadership principles and styles through case studies and role-playing exercises with emphasis on military situations. Participation in leadership labs, physical training program and field training exercises required. Prerequisites: department permission and completion of one of the following: ROTC basic course at BGSU; ROTC Basic Camp at Fort Knox, KY; prior active duty service; Army Reserve or Army National Guard basic training. Extra fee.
MSL	3020	Small Unit Operations	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	1.00	3.00	On demand. Detailed study of selected military subjects. Offered on lecture basis in seminar or independent study depending on students' needs and nature of material. May be repeated to six hours. Prerequisite: consent of instructor. Extra fee.

Subject:	Number	Long Course Title	Min Units	Max Units	Long Description
Musicology/Composition/Theory					

MUCT	1010	Exploring Music	2.00	2.00	Fall, Spring, Summer. Focus on three types of contexts important to appreciating music: the composer, the place and the time. Not open to bachelor of music degree students. Applicable to the BG Perspective (general education) humanities and arts requirement.
MUCT	1100	Elements of Music	3.00	3.00	Designed to lead students to a mastery of rudiments of written theory and to provide introductory work in the development of related listening skills.
MUCT	1130	Basic Musicianship I	2.00	2.00	Fall, Summer. Thorough study of music fundamentals; basic ear training and sight singing; introduction to diatonic harmony and melodic organization, with examples from a variety of music literature. Open only to music majors and minors with low scores on placement exam.
MUCT	1140	Basic Musicianship II	2.00	2.00	Spring. MUCT 1130 continued. Prerequisite: MUCT 1130.
MUCT	1150	Accelerated Fundamentals of Music	1.00	1.00	Fall (first eight weeks). Intense study of reading and writing music notation for scales, keys, intervals, triads, rhythm and meter. Open only to music majors and minors. Prerequisite: middle score on placement exam. Should be taken concurrently with MUCT 1410 and MUCT 1510.
MUCT	1160	Fundamentals of Composition	2.00	2.00	Fall, Spring. Basic compositional techniques for students not yet admitted to baccalaureate program in music composition. May be repeated.
MUCT	1250	Music of World Cultures	3.00	3.00	Fall, Spring, Summer. Musical systems of major non-Western art musics: Africa, Near East, Pacific and Asia. Theoretical, analytical and cultural concepts related to music. Not open to bachelor of music degree students, except for those in the world music program. Applicable to the BG Perspective (general education) humanities and arts and international perspective requirements.
MUCT	1410	Aural Skills I	2.00	2.00	Fall, Spring, Summer. Basic skills in sightsinging; rhythmic, melodic and harmonic dictation of diatonic and triadic materials. Prerequisite: middle or high score on placement exam or MUCT 1100 or MUCT 1140. Should be taken concurrently with MUCT 1510.
MUCT	1420	Aural Skills II	2.00	2.00	Fall, Spring, Summer. Sightsinging and dictation of more difficult diatonic and triadic materials. Prerequisite: MUCT 1410 and for those with a middle score on the placement exam, MUCT 1150. Should be taken concurrently with MUCT 1520.

MUCT	1510	Theory I	2.00	2.00	Fall. Knowledge and skills in diatonic harmony, melodic organization, form-creating aspects, with examples from a variety of music literature. Prerequisite: middle or high score on placement exam. Should be taken concurrently with MUCT 1410 and, for those with middle score on placement exam, MUCT 1150.
MUCT	1520	Theory II	2.00	2.00	Spring. Knowledge and skills in diatonic and chromatic harmony, melodic organization, part forms, with examples from a variety of music literature. Prerequisite: MUCT 1510. Should be taken concurrently with MUCT 1420.
MUCT	2100	Jazz Aural Skills	2.00	2.00	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	1.00	4.00	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	2.00	2.00	Fall, Spring. Music of important composers from various periods; directed listening of selected works. Not open to bachelor of music degree students. Applicable to the BG Perspective (general education) humanities and arts requirement.
MUCT	2330	Music in African Culture	2.00	2.00	Spring even years. The study of music in various groups of sub-Sahara Africa with emphasis on its relation to individual cultures, its structure and performance. Applicable to the BG Perspective (general education) humanities and arts and international perspective requirements.
MUCT	2340	Music in Japanese Culture	2.00	2.00	Spring odd years. The study of music in Japanese religious ritual, historical court and popular settings, and music for theater and concert, with emphasis on its socio-historical context. Applicable to the BG Perspective (general education) humanities and arts and international perspective requirements.
MUCT	2350	Music in Indonesian Culture	2.00	2.00	Fall. The study of music in Indonesia, particularly in Bali and Java, with emphasis on its historical and cultural context. Applicable to the BG Perspective (general education) humanities and arts and international perspective requirements.

MUCT	2370	Jazz	3.00	3.00	Spring. The music of various styles of jazz from around 1900 to the present. Theoretical, analytical, cultural and performance concepts will be related to the music. Applicable to the BG Perspective (general education) cultural diversity in the United States requirement.
MUCT	2410	Aural Skills III	2.00	2.00	Fall, Spring, Summer. Intermediate skills in sightsinging; rhythmic, melodic and harmonic dictation of chromatic material including seventh chords. Should be taken concurrently with MUCT 2510. Prerequisite: MUCT 1420.
MUCT	2420	Aural Skills IV	2.00	2.00	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	2.00	2.00	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	2.00	2.00	Spring. Twentieth-century techniques and styles. Prerequisite: MUCT 2510. Should be taken concurrently with MUCT 2420.
MUCT	2610	Music History I	3.00	3.00	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	2.00	2.00	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	2.00	2.00	Fall even years. Use of keyboard skills related to score reading, transposition, extemporization and accompanying.
MUCT	3090	Keyboard Harmony II	2.00	2.00	Spring odd years. Continuation of keyboard skills developed in MUCT 3080. Prerequisite: MUCT 3080.
MUCT	3150	Orchestration	2.00	2.00	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	2.00	2.00	Fall, Spring. Scoring for band instruments, from small ensembles to concert band. Prerequisite: MUCT 2510.
MUCT	3250	Choral Arranging	2.00	2.00	Spring. Text analysis; arranging for men's, treble, and mixed voices; A Cappella and accompanied ensemble arranging techniques. Prerequisite: MUCT 2510.

MUCT	3450	Survey of Music Technology	3.00	3.00	Spring. Overview of music technology; use of computers in music (yesterday, today and tomorrow). Philosophical implications of technology and musical expression. Literature of music technology in pop, jazz and the avant-garde. No prerequisites.
MUCT	3610	Music History III	2.00	2.00	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	1.00	4.00	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	2.00	2.00	Fall odd years. 16th-century counterpoint. Prerequisites: MUCT 2510, MUCT 2610.
MUCT	4040	Counterpoint II	2.00	2.00	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	3.00	3.00	Fall, Spring. Research of topics and problems in music history. Prerequisite: consent of instructor. May be repeated to 12 hours.
MUCT	4070	Performance Practice	2.00	2.00	Fall even years. Performance practice in music, improvisation, ornamentation, accompaniment, instrumentation, rhythm and tempo. Prerequisite: MUCT 2620.
MUCT	4080	Chamber Music Literature	2.00	2.00	Fall odd years. Study of selected major chamber works of various periods. Prerequisite: MUCT 2620.
MUCT	4090	Symphonic Literature	2.00	2.00	Fall even years. Study of major symphonic works from 1750 to modern period. Prerequisites: MUCT 2520, MUCT 2620.
MUCT	4100	Contemporary Music Pro-Seminar	2.00	2.00	Fall. Musical styles and techniques of 20th century. Compositional and analytical approach, considering various influences of past. May be repeated to eight hours. Prerequisite: MUCT 3610.
MUCT	4120	Opera Literature	2.00	2.00	Fall odd years. Study of major operatic works of various periods. Prerequisite: MUCT 2620.
MUCT	4160	Composition	1.00	4.00	Fall, Spring. Private composition lessons for juniors and seniors. May be repeated. Limited enrollment course, with registration priority given to composition majors. Others accommodated on a space-available basis by audition.
MUCT	4200	Introduction to Ethnomusicology	2.00	2.00	Spring even years. Topics and techniques in ethnomusicology. Open to students interested in all music as aspects of culture.

MUCT	4210E	Afro-Caribbean Ensemble	1.00	1.00	Fall, Spring. Elective (small) ensemble. May be repeated.
MUCT	4220E	Balinese Gamelan	1.00	1.00	Fall, Spring. Elective (small) ensemble. May be repeated.
MUCT	4230E	Early Music Ensemble (Instrumental)	1.00	1.00	Fall, Spring. Elective (small) ensemble. May be repeated.
MUCT	4240E	Early Music Ensemble (Vocal)	1.00	1.00	Fall, Spring. Elective (small) ensemble. May be repeated.
MUCT	4250E	New Music Ensemble	1.00	1.00	Fall, Spring. Elective (small) ensemble. May be repeated.
MUCT	4310	Aesthetics of Black Music	3.00	3.00	Spring. West African and African-American concepts of music; modifications and innovations in America from slavery to present. Applicable to the BG Perspective (general education) cultural diversity in the United States requirement.
MUCT	4360	Audio Recording Techniques	2.00	2.00	Fall, Spring. Concert and studio multi-track recording methods culminating with an actual recording session. Students will gain some hands-on experience. Extra fee.
MUCT	4370	Advanced Recording Techniques	2.00	2.00	Spring. Advanced studio multi-track techniques and stereo concert hall recording. Emphasis placed on applied recording techniques, in-depth understanding of peripheral hardware and microphone choice and placement. Prerequisite: MUCT 4360. Extra fee.
MUCT	4440	Music Technology I	3.00	3.00	Fall. Introduction to the principles and techniques of music technology and electroacoustic music. Includes hands-on investigation of course techniques and principles in a studio setting. Course materials are practiced during individual studio lab times. Prerequisites: None. Extra fee.
MUCT	4450	Music Technology II	3.00	3.00	Spring. Continuation of study into the principles and techniques of music technology and electroacoustic music. Course materials are practiced during individual studio lab times. Prerequisite: MUCT 4440 or consent of instructor. Extra fee.
MUCT	4460	Music Technology III	3.00	3.00	Fall. Advanced concepts related to principles and techniques of music technology and electroacoustic music. Emphasis on music programming languages. Course materials are practiced during individual studio lab times and tutorial session. Prerequisite: MUCT 4450 or consent of instructor. Extra fee.

MUCT	4470	Music Technology IV	3.00	3.00	Spring. Continuation of advanced concepts related to principles of music technology and electroacoustic music. Emphasis on music programming languages. Course materials are practiced during individual studio lab times and tutorial sessions. Prerequisite: MUCT 4460 or consent of instructor. Extra fee.
MUCT	4700	Reading and Research	2.00	4.00	Fall, Spring. Directed independent reading and research in history, philosophy, theory or aesthetics of music. Prerequisites: 16 hours of music theory and history, and consent of instructor. May be repeated.

Subject: Music Education	Number	Long Course Title	Min Units	Max Units	Long Description
MUED	1250	Percussion Class	1.00	1.00	Fall, Spring. Prerequisite: MUED 1450. (Elective).
MUED	1300	Trumpet-French Horn Class	1.00	1.00	Fall, Spring, Alternate summers.
MUED	1360	Trombone-Euphonium-Tuba Class	1.00	1.00	Fall, Spring, Alternate summers.
MUED	1400	Clarinet-Saxophone Class	1.00	1.00	Fall, Spring, Alternate summers.
MUED	1450	Flute-Percussion Class	1.00	1.00	Fall, Spring.
MUED	1460	Oboe-Bassoon Class	1.00	1.00	Fall, Spring, Alternate summers.
MUED	1470	Bassoon Reed Class	1.00	1.00	Spring. (Elective).
MUED	1500	Class Piano	1.00	1.00	Fall, Spring. Class piano instruction for beginners and those with minimal keyboard experience. Placement into MUED 1500 and MUED 1510 is determined on the basis of an audition. Only open for credit to music majors and minors. Grade of C or better required for admittance into MUED 1510. Extra fee.
MUED	1510	Class Piano	1.00	1.00	Fall, Spring. MUED 1500 continued. Grade of C or better required for admittance into sophomore-level group piano courses. This course includes Piano Proficiency I. Extra fee.
MUED	1540	Class Piano	1.00	1.00	Fall, Spring. Intermediate class study. A more advanced approach to the acquisition of functional skills for those with advanced keyboard facility who need class instruction in order to pass functional proficiency requirements. A grade of C or better required for admittance into sophomore-level group piano courses; includes Piano Proficiency I. Extra fee.

MUED	1560	Beginning Piano for the Non-music Major I	2.00	2.00	Fall, Spring. Class piano course for beginning work in music reading, pop/jazz chords, keyboard technique, improvisation and elementary piano literature. Not open to music majors or minors. Extra fee.
MUED	1570	Beginning Piano for the Non-music Major II	2.00	2.00	Spring. MUED 1560 continued. Class piano course for beginning work in music reading, pop/jazz chords, keyboard technique, improvisation and easy piano literature. Not open to music majors or minors. Prerequisite: MUED 1560 or equivalent. Extra fee.
MUED	1700	Voice Class	1.00	1.00	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	2.00	2.00	Fall, Spring.
MUED	1950	Guitar Class	1.00	1.00	Fall, Spring, Summer. (MUED majors and minors only.)
MUED	2220	Global Music Traditions	2.00	2.00	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	3.00	3.00	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	2.00	2.00	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	2.00	2.00	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)	2.00	2.00	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	1.00	1.00	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	2.00	2.00	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	1.00	1.00	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)	2.00	2.00	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	2.00	2.00	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	3.00	3.00	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	2.00	2.00	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	2.00	2.00	Fall, Spring. Field component of MUED 3420. Fall semester-students are assigned to the University Cooperative schools, M/W mornings. Spring semester: Option 1, assigned to the University Cooperative schools, M/W mornings 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	2.00	2.00	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	2.00	2.00	Fall. Field component of MUED 3440. Students are assigned to the University Lab schools and/or area schools. Includes observation and teaching. To be taken with MUED 3440. F=minimum 48 hours. Prerequisites: MUED 2400, GPA of 2.5, grade of "C" or better in each course with a MUED prefix, satisfactory progress in all MUCT courses taken prior to enrollment, pass Piano Proficiency I, instrumental majors must have successfully completed two techniques classes and the voice class with a grade of "C" or better. Graded S/U.
MUED	3460	Classroom Methods	2.00	2.00	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	2.00	2.00	Spring. Field component of MUED 3460. Students are assigned to the University Lab schools and/or area schools. Includes observation and teaching. F=minimum 48 hours. Prerequisites: MUED 2400, GPA of 2.5, grade of "C" or better in each course with a MUED prefix, satisfactory progress in all MUCT courses taken prior to enrollment, pass Piano Proficiency I, instrumental majors must have successfully completed two techniques classes and the voice class with a grade of "C" or better. Graded S/U.

MUED	3480	Orchestra/Band Methods	2.00	2.00	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	1.00	2.00	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	2.00	2.00	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	1.00	4.00	On demand. Intensive educational experience on selected topics related to skill development, content update or materials development. Typically, an all day or similar concentrated time format used. Requirements usually met within time format. May be repeated.
MUED	4020	Beginning Wind and Percussion Instrument Repair	1.00	1.00	Spring. Basic practices and techniques of instrument repair. Extra fee.

MUED	4510	Advanced Methods Classroom Music	2.00	2.00	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	2.00	2.00	Spring. Techniques in planning, charting and rehearsing marching band shows and administering public school marching bands. Prerequisite: junior standing.
MUED	4590	Examination and Performance of Choral Repertoire	2.00	2.00	Spring. Material suitable for use in secondary schools; related performance practices and their solutions. C=5 hours.
MUED	4600	Reading in the Content Area	3.00	3.00	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	1.00	3.00	Fall, Spring. Special topics in music education. Admittance by consent of instructor. May be repeated.
MUED	4910	Teaching Practicum	1.00	2.00	Fall, Spring. Supervised individualized teaching experience in area of specialization. Prerequisite: consent of instructor. Graded S/U.
MUED	4970	Student Teaching	10.00	16.00	Fall, Spring. Supervised teaching in area schools, supplemented by conferences and seminars. Meets student teaching requirement for multi-age certification/licensure in music. Graded S/U. Extra fee.

Subject: General Music	Number	Long Course Title	Min Units	Max Units	Long Description
MUS	99	Recital Attendance	0.00	0.00	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	2.00	2.00	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	2.00	2.00	Fall, Spring. MUS 1900 continued. Open to non-music majors only. Prerequisites: MUS 1900 or previous experience and consent of instructor.
Subject: Music Performance Studies	Number	Long Course Title	Min Units	Max Units	Long Description
MUSP	1600	Sight Reading I	1.00	1.00	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	1.00	1.00	Fall, Spring. Prerequisite: permission of instructor. Extra fee.
MUSP	2100	Piano Repertoire I	3.00	3.00	Fall alternate years. Literature from early keyboard music through classical. Prerequisite: consent of instructor.
MUSP	2110	Piano Repertoire II	3.00	3.00	Spring alternate years. Literature from Romantic era to present. Prerequisite: consent of instructor.
MUSP	2120	Jazz Improvisation and Repertoire I	2.00	2.00	Fall alternate years. Techniques of jazz improvisation and related repertoire; application of basic scales, arpeggios, melodic construction to blues and standard pop tunes. Prerequisite: MUCT 1510 or consent of instructor.
MUSP	2130	Jazz Improvisation and Repertoire II	2.00	2.00	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	2.00	2.00	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	2.00	2.00	Fall alternate years. Literature from 1325 to the present, excluding the music of J.S. Bach. Prerequisite: consent of instructor.
MUSP	2160	Organ Repertoire II	2.00	2.00	Spring alternate years. Organ music of J.S. Bach. Prerequisite: consent of instructor.
MUSP	2180	Jazz Piano Fundamentals	3.00	3.00	Spring alternate years. Analysis of jazz piano accompaniment styles; techniques of left-hand voicing and rhythmic accompaniment; scale repertoire; piano arranging from lead sheets. Prerequisites: MUED 1510 and either a high score on placement exam or MUCT 1100, MUCT 1140 or MUCT 1150.
MUSP	2190	Jazz Pedagogy	2.00	2.00	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	1.00	4.00	Fall, Spring, Summer. Prerequisite: passage of audition. May be repeated. Extra fee.
MUSP	2240	Singer's Diction II	2.00	2.00	Spring. Application of the International Phonetic Alphabet (IPA) to selected German and French song texts. Instruction and drill in the rules of pronunciation as applied to the singing of these languages. Prerequisite: MUSP 2140.

MUSP	2310	Applied Trumpet	1.00	4.00	Fall, Spring, Summer. Prerequisite: passage of audition. May be repeated. Extra fee.
MUSP	2320	Applied French Horn	1.00	4.00	Fall, Spring, Summer. Prerequisite: passage of audition. May be repeated. Extra fee.
MUSP	2330	Applied Trombone	1.00	4.00	Fall, Spring, Summer. Prerequisite: passage of audition. May be repeated. Extra fee.
MUSP	2340	Applied Euphonium	1.00	4.00	Fall, Spring, Summer. Prerequisite: passage of audition. May be repeated. Extra fee.
MUSP	2350	Applied Tuba	1.00	4.00	Fall, Spring, Summer. Prerequisite: passage of audition. May be repeated. Extra fee.
MUSP	2410	Applied Flute	1.00	4.00	Fall, Spring, Summer. Prerequisite: passage of audition. May be repeated. Extra fee.
MUSP	2420	Applied Oboe	1.00	4.00	Fall, Spring, Summer. Prerequisite: passage of audition. May be repeated. Extra fee.
MUSP	2430	Applied Clarinet	1.00	4.00	Fall, Spring, Summer. Prerequisite: passage of audition. May be repeated. Extra fee.
MUSP	2440	Applied Saxophone	1.00	4.00	Fall, Spring, Summer. Prerequisite: passage of audition. May be repeated. Extra fee.
MUSP	2450	Applied Bassoon	1.00	4.00	Fall, Spring, Summer. Prerequisite: passage of audition. May be repeated. Extra fee.
MUSP	2460	Applied Jazz Saxophone	1.00	4.00	Fall, Spring. May be repeated. Prerequisite: passage of audition. Extra fee.
MUSP	2470	Applied Jazz Trumpet	1.00	4.00	Fall, Spring. May be repeated. Prerequisite: passage of audition. Extra fee.
MUSP	2480	Applied Jazz Trombone	1.00	4.00	Fall, Spring. May be repeated. Prerequisite: passage of audition. Extra fee.
MUSP	2490	Applied Jazz Voice	1.00	4.00	Fall, Spring, Summer. Prerequisite: passage of audition. May be repeated.
MUSP	2550	Applied Jazz Percussion	1.00	4.00	Fall, Spring. May be repeated. Prerequisite: passage of audition. Extra fee.
MUSP	2560	Applied Jazz Bass	1.00	4.00	Fall, Spring. May be repeated. Prerequisite: passage of audition. Extra fee.
MUSP	2600	Applied Jazz Guitar	1.00	4.00	Fall, Spring. May be repeated. Prerequisite: passage of audition. Extra fee.

MUSP	2610	Applied Piano	1.00	4.00	Fall, Spring, Summer. (Permission of instructor required for two or more credits.) Prerequisite: passage of audition. May be repeated. Extra fee.
MUSP	2620	Applied Harpsichord	1.00	4.00	Fall, Spring, Summer. Prerequisite: passage of audition. May be repeated. Extra fee.
MUSP	2630	Applied Organ	1.00	4.00	Fall, Spring, Summer. Prerequisite: passage of audition. May be repeated. Extra fee.
MUSP	2640E	Accompanying Techniques I	1.00	1.00	Fall. Problems involving musical comprehension of solo part together with accompaniment and general introduction to vocal and instrumental accompaniment literature. Prerequisite: MUSP 1600 or consent of instructor.
MUSP	2650E	Piano Four-Hand Class	1.00	1.00	Fall, Spring. May be repeated. Appropriate four-hand literature. Prerequisite: MUSP 1600 or consent of instructor.
MUSP	2690	Applied Jazz Piano	1.00	4.00	Fall, Spring. May be repeated. Prerequisite: passage of audition. Extra fee.
MUSP	2710	Para-Voice	2.00	2.00	Fall, Spring. No audition required. May be repeated. Extra fee.
MUSP	2720	Applied Voice	1.00	4.00	Fall, Spring, Summer. Prerequisite: passage of audition. May be repeated. Extra fee.
MUSP	2730	Musical Theatre Group Voice	1.00	1.00	Fall, Spring. Intended for first year Musical Theatre students. May be repeated. Two class periods per week. Focus on a basic knowledge of correct and healthy vocal techniques. Students will sing repertoire from the musical theatre as well as other age appropriate vocal literature. Designed to help students create a solid vocal base, which will enable free and expressive singing. Prerequisite: passage of audition into Musical Theatre major.
MUSP	2750	Introduction to Opera Theater	2.00	2.00	Fall. Basic terminology and practices of opera theatre.
MUSP	2810	Applied Violin	1.00	4.00	Fall, Spring, Summer. Prerequisite: passage of audition. May be repeated. Extra fee.
MUSP	2820	Applied Viola	1.00	4.00	Fall, Spring, Summer. Prerequisite: passage of audition. May be repeated. Extra fee.
MUSP	2830	Applied Cello	1.00	4.00	Fall, Spring, Summer. Prerequisite: passage of audition. May be repeated. Extra fee.
MUSP	2840	Applied Double Bass	1.00	4.00	Fall, Spring, Summer. Prerequisite: passage of audition. May be repeated. Extra fee.

MUSP	2850	Applied Harp	1.00	4.00	Fall, Spring, Summer. Prerequisite: passage of audition. May be repeated. Extra fee.
MUSP	2860	Applied Classical Guitar	1.00	4.00	Fall, Spring, Summer. Prerequisite: passage of audition. May be repeated. Extra fee.
MUSP	3050	Conducting I	2.00	2.00	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	2.00	2.00	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	1.00	1.00	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	2.00	2.00	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	2.00	2.00	Spring alternate years. 19th and 20th century French and German art song literature. Prerequisite: consent of instructor.
MUSP	3130	Jazz Arranging Analysis I	3.00	3.00	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	3.00	3.00	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	1.00	1.00	Fall, Spring. Elective (small) ensemble. May be repeated.
MUSP	3210E	Brass Choir	1.00	1.00	Spring. Elective (small) ensemble. May be repeated.
MUSP	3220E	Classical Guitar	1.00	1.00	Fall, Spring. Elective (small) ensemble. May be repeated.
MUSP	3230E	Electric Guitar	1.00	1.00	Fall, Spring. Elective (small) ensemble. May be repeated.
MUSP	3240E	Euphonium-Tuba	1.00	1.00	Fall, Spring. Elective (small) ensemble. May be repeated.

MUSP	3250E	Harp	1.00	1.00	Fall, Spring. Elective (small) ensemble. May be repeated.
MUSP	3260E	Horn Club	1.00	1.00	Fall, Spring. Elective (small) ensemble. May be repeated.
MUSP	3270E	Jazz	1.00	1.00	Fall, Spring. Elective (small) ensemble. May be repeated.
MUSP	3280E	Jazz Lab I	1.00	1.00	Fall, Spring. Major (large) ensemble. May be repeated.
MUSP	3290E	Jazz Lab II	1.00	1.00	Fall, Spring. Major (large) ensemble. May be repeated.
MUSP	3300E	Mixed Chamber	1.00	1.00	Fall, Spring. Elective (small) ensemble. May be repeated.
MUSP	3310E	Music Theater Productions	1.00	1.00	Fall, Spring. Elective (small) ensemble. May be repeated.
MUSP	3320E	Percussion	1.00	1.00	Fall, Spring. Elective (small) ensemble. May be repeated.
MUSP	3330E	Piano Accompaniment Practicum	1.00	1.00	Fall, Spring. Elective (small) ensemble. May be repeated.
MUSP	3340E	Saxophone	1.00	1.00	Fall, Spring. Elective (small) ensemble. May be repeated.
MUSP	3350E	String	1.00	1.00	Fall, Spring. Elective (small) ensemble. May be repeated.
MUSP	3360E	Trombone Choir	1.00	1.00	Fall, Spring. Elective (small) ensemble. May be repeated.
MUSP	3370E	Trumpet Guild	1.00	1.00	Fall, Spring. Elective (small) ensemble. May be repeated.
MUSP	3380E	Varsity Quartet	1.00	1.00	Fall, Spring. Elective (small) ensemble. May be repeated.
MUSP	3390E	Vocal Chamber Lab	1.00	1.00	Fall, Spring. Elective (small) ensemble. May be repeated.
MUSP	3400E	Vocal Jazz Ensemble	1.00	1.00	Fall, Spring. Elective (small) ensemble. May be repeated.
MUSP	3410E	Woodwind	1.00	1.00	Fall, Spring. Elective (small) ensemble. May be repeated.
MUSP	3600	Sight Reading II	1.00	1.00	Spring. 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	1.00	1.00	Spring. MUSP 2640 continued, using more advanced literature. Prerequisite: MUSP 2640 or consent of instructor.
MUSP	3670	Piano Pedagogy I	3.00	3.00	Fall alternate years. Methods, materials and teaching techniques for the beginning pre-college student. Prerequisite: consent of instructor.
MUSP	3680	Piano Pedagogy II	3.00	3.00	Spring alternate years. Methods, materials and teaching techniques for the intermediate pre-college student. Prerequisite: consent of instructor.
MUSP	3700	Vocal Pedagogy	3.00	3.00	Spring. Basic concepts of vocal pedagogy; methods, materials and terminology. Prerequisite: consent of instructor.

MUSP	3780E	Opera Theater	2.00	2.00	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	2.00	2.00	Fall alternate years. Hymn playing, transposition, modulation, improvisation and accompanying at the organ. Prerequisite: consent of instructor.
MUSP	3970	Service Playing II	2.00	2.00	Spring alternate years. MUSP 3960 continued. Prerequisite: MUSP 3960 or consent of instructor.
MUSP	4010	History and Literature of Jazz	2.00	2.00	Spring alternate years. Jazz from African influences through present developments; personalities involved in stylistic change.
MUSP	4020	Jazz Composition	2.00	2.00	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	3.00	3.00	Keyboard literature to 1700 based on original source material and contemporary editions; emphasis on performance. Prerequisite: consent of instructor.
MUSP	4110	Harpsichord Repertoire II	3.00	3.00	Solo harpsichord literature from 1700 to the present, emphasis on performance. Prerequisite: MUSP 4100 or consent of instructor.
MUSP	4150	Organ Construction	2.00	2.00	History of the design and construction of the organ. Prerequisite: consent of instructor.
MUSP	4160	Church Music	2.00	2.00	Music of the major Western churches; plainsong, hymnology, liturgies. Prerequisite: consent of instructor.
MUSP	4210	Applied Percussion	1.00	4.00	Fall, Spring, Summer. Prerequisite: passage of audition. May be repeated. Extra fee.
MUSP	4310	Applied Trumpet	1.00	4.00	Fall, Spring, Summer. Prerequisite: passage of audition. May be repeated. Extra fee.
MUSP	4320	Applied French Horn	1.00	4.00	Fall, Spring, Summer. Prerequisite: passage of audition. May be repeated. Extra fee.
MUSP	4330	Applied Trombone	1.00	4.00	Fall, Spring, Summer. Prerequisite: passage of audition. May be repeated. Extra fee.
MUSP	4340	Applied Euphonium	1.00	4.00	Fall, Spring, Summer. May be repeated. Extra fee.
MUSP	4350	Applied Tuba	1.00	4.00	Fall, Spring, Summer. May be repeated. Extra fee.
MUSP	4360E	Wind Ensemble	1.00	1.00	Fall. Major (large) ensemble. May be repeated.

MUSP	4370E	Wind Symphony	2.00	2.00	Spring. Major (large) ensemble. May be repeated.
MUSP	4380E	Concert Band	1.00	2.00	Fall, Spring. Major (large) ensemble. May be repeated.
MUSP	4390E	Marching Band	2.00	2.00	Fall. Major (large) ensemble. May be repeated.
MUSP	4400E	University Band	1.00	1.00	Fall, Spring. Major (large) ensemble. May be repeated.
MUSP	4410	Applied Flute	1.00	4.00	Fall, Spring, Summer. May be repeated. Extra fee.
MUSP	4420	Applied Oboe	1.00	4.00	Fall, Spring, Summer. May be repeated. Extra fee.
MUSP	4430	Applied Clarinet	1.00	4.00	Fall, Spring, Summer. May be repeated. Extra fee.
MUSP	4440	Applied Saxophone	1.00	4.00	Fall, Spring, Summer. Prerequisite: passage of audition. May be repeated. Extra fee.
MUSP	4450	Applied Bassoon	1.00	4.00	Fall, Spring, Summer. Prerequisite: passage of audition. May be repeated. Extra fee.
MUSP	4460	Applied Jazz Saxophone	1.00	4.00	Fall, Spring. May be repeated. Prerequisite: passage of audition. Extra fee.
MUSP	4470	Applied Jazz Trumpet	1.00	4.00	Fall, Spring. May be repeated. Prerequisite: passage of audition. Extra fee.
MUSP	4480	Applied Jazz Trombone	1.00	4.00	Fall, Spring. May be repeated. Prerequisite: passage of audition. Extra fee.
MUSP	4490	Applied Jazz Voice	1.00	4.00	Fall, Spring, Summer. Prerequisite: passage of audition. May be repeated.
MUSP	4500E	Athletic Band	1.00	1.00	Spring. Major (large) ensemble. May be repeated.
MUSP	4520	Percussion Repertoire and Pedagogy	2.00	2.00	Spring alternate years. Research into percussion repertoire and pedagogy. Required of students majoring in percussion performance.
MUSP	4530	Brass Pedagogy	2.00	2.00	Spring alternate years. Teaching techniques and materials for brass instruments. Prerequisite: consent of instructor.
MUSP	4540	Woodwind Pedagogy	2.00	2.00	Spring. Teaching techniques and materials for woodwind instruments. Prerequisite: consent of instructor.
MUSP	4550	Applied Jazz Percussion	1.00	4.00	Fall, Spring. May be repeated. Prerequisite: passage of audition. Extra fee.
MUSP	4560	Applied Jazz Bass	1.00	4.00	Fall, Spring. May be repeated. Prerequisite: passage of audition. Extra fee.
MUSP	4580	String Pedagogy	2.00	2.00	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	2.00	2.00	Spring alternate years. Principles, techniques and literature applied to various levels of organ study. Prerequisite: consent of instructor.
MUSP	4600	Applied Jazz Guitar	1.00	4.00	Fall, Spring. May be repeated. Extra fee.
MUSP	4610	Applied Piano	1.00	4.00	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	1.00	4.00	I, II. Prerequisite: passage of audition. May be repeated. Extra fee.
MUSP	4630	Applied Organ	1.00	4.00	Fall, Spring, Summer. Prerequisite: passage of audition. May be repeated. Extra fee.
MUSP	4640	Duo Repertoire	2.00	2.00	Spring. A survey of the instrumental sonata and duo repertoire for various instruments and piano. Focus is on listening and analysis of repertoire and includes a limited amount of performance. Prerequisite: MUCT 2620.
MUSP	4650	Orchestral Audition Repertoire for Cello and String Bass	1.00	1.00	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	1.00	1.00	Fall, Spring. May be repeated. Laboratory in supervised piano teaching, both private and classes. Prerequisite: MUSP 3670 or consent of instructor.
MUSP	4670	Guitar Pedagogy	2.00	2.00	On Demand. Principles, techniques, and literature applied to various levels of guitar study. Prerequisite: consent of instructor.
MUSP	4680	Orchestral Audition Repertoire for Violin	1.00	1.00	Study and performance of orchestral excerpts and other audition repertoire. May be repeated for credit. Prerequisite: consent of instructor.
MUSP	4690	Applied Jazz Piano	1.00	4.00	Fall, Spring. May be repeated. Prerequisite: passage of audition. Extra fee.
MUSP	4700	Readings, Research and Performance in Music	1.00	4.00	Fall, Spring, Summer. May be repeated. Directed independent readings, research and/or performance related to performance studies. Prerequisites: consent of instructor and department chair.
MUSP	4710	Para-Voice	2.00	2.00	Fall, Spring. No audition required. May be repeated. Extra fee.
MUSP	4720	Applied Voice	1.00	4.00	Fall, Spring, Summer. Prerequisite: passage of audition. May be repeated. Extra fee.

MUSP	4730	Vocal Pedagogy Practicum	1.00	1.00	Fall, Spring. May be repeated. Supervised teaching of both private and class voice. Includes participation in designated segments of MUED 2400 and/or MUED 3400. Prerequisite: MUSP 3700 or consent of instructor.
MUSP	4760E	University Choral Society	1.00	1.00	Fall, Spring. Major (large) ensemble. May be repeated.
MUSP	4770E	A Cappella Choir	1.00	1.00	Fall, Spring. Major (large) ensemble. May be repeated.
MUSP	4780E	Collegiate Chorale	2.00	2.00	Fall, Spring. Major (large) ensemble. May be repeated.
MUSP	4790E	University Women's Chorus	1.00	1.00	Fall, Spring. Elective (large) ensemble. May be repeated.
MUSP	4800E	University Men's Chorus	1.00	1.00	Fall, Spring. Elective (large) ensemble. May be repeated.
MUSP	4810	Applied Violin	1.00	4.00	Fall, Spring, Summer. Prerequisite: passage of audition. May be repeated. Extra fee.
MUSP	4820	Applied Viola	1.00	4.00	Fall, Spring, Summer. Prerequisite: passage of audition. May be repeated. Extra fee.
MUSP	4830	Applied Cello	1.00	4.00	Fall, Spring, Summer. Prerequisite: passage of audition. May be repeated. Extra fee.
MUSP	4840	Applied Double Bass	1.00	4.00	Fall, Spring, Summer. Prerequisite: passage of audition. May be repeated. Extra fee.
MUSP	4850	Applied Harp	1.00	4.00	Fall, Spring, Summer. May be repeated. Extra fee.
MUSP	4860	Applied Classical Guitar	1.00	4.00	Fall, Spring, Summer. Prerequisite: passage of audition. May be repeated. Extra fee.
MUSP	4880E	Chamber Orchestra	1.00	1.00	Elective (large) ensemble. May be repeated.
MUSP	4890E	Philharmonia	2.00	2.00	Fall, Spring. Major (large) ensemble. May be repeated.
MUSP	4950	Senior Recital	2.00	2.00	Fall, Spring, Summer. May be repeated. For performance studies majors only. Required full recital for all degree options. Repertoire requirements determined by respective areas/studios. Prerequisite: satisfactory completion of recital jury and consent of department chair.

Subject: Neuroscience	Number	Long Course Title	Min Units	Max Units	Long Description
NEUR	4500	Neuroscience Seminar	1.00	1.00	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	1.00	3.00	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.
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Subject: Nursing	Number	Long Course Title	Min Units	Max Units	Long Description
NURS	1000	Orientation to Nursing	1.00	1.00	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	3.00	3.00	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. Corequisite: NURS 3110, NURS 3130, NURS 3170, NURS 3180. Extra fee.
NURS	3060	Holistic Approach to Nursing Interventions	3.00	3.00	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	2.00	2.00	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	3.00	3.00	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	7.00	7.00	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	3.00	3.00	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	3170	Concepts of Pathophysiology	3.00	3.00	Fall. Basic science of pathophysiology of disease across the life span. Prepares for critical thinking in application of concepts to nursing practice. Prerequisites: NURS 3010, NURS 3110. Corequisites: NURS 3120, NURS 3180, NURS 3210. Extra fee.
NURS	3180	Concepts of Nursing Pharmacology	3.00	3.00	Fall. Fundamental pharmacologic principles of physiological response to drugs, therapeutic outcomes, and potential drug interactions. Prepares for critical thinking in application of pharmacotherapy principles to nursing. Prerequisites: NURS 3010, NURS 3110. Corequisites: NURS 3120, NURS 3170, NURS 3210. Extra fee.
NURS	3210	Nursing Agency III: Interventions	3.00	3.00	Fall. Application of principles of nursing interventions in the learning lab on simulated clients. Prerequisites: NURS 3010 and NURS 3110. Corequisites: NURS 3120, NURS 3170, NURS 3180. Extra fee.
NURS	3620	Women's Health Nursing	5.00	5.00	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	5.00	5.00	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	5.00	5.00	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	5.00	5.00	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	4020	Leadership and Management in Nursing	3.00	3.00	Spring. Principles and theories of management and leadership as a basis for provision of nursing care. Prerequisites: NURS 3130, NURS 3620, NURS 3630, NURS 3640, NURS 4010, NURS 4950. Corequisite: NURS 4030. Extra fee.
NURS	4030	Adult Health Nursing II	7.00	7.00	Spring. Design and implementation of nursing systems for the adult population with complex health states. Includes application of nursing leadership principles in clinical settings. Prerequisites: NURS 3130, NURS 3620, NURS 3630, NURS 3640, NURS 4010, NURS 4950. Corequisites: NURS 4020, NURS 4250. Extra fee.
NURS	4050	Oncology Nursing	3.00	3.00	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	4.00	4.00	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	5.00	5.00	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	4.00	4.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	4.00	4.00	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	6.00	6.00	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	5.00	5.00	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	3.00	3.00	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	4220	Applied Pathophysiology and Pharmacology	4.00	4.00	Fall, Spring. Concepts of pathophysiology and pharmacology. Prepares for critical thinking in application of concepts to nursing practice. Prerequisite: Admission to RN/BSN program. Extra fee.
NURS	4230	Applied Health Assessment	3.00	3.00	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	2.00	2.00	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	3.00	3.00	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	4.00	4.00	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	1.00	3.00	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	4.00	4.00	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	3.00	3.00	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.

Subject: Operations Research	Number	Long Course Title	Min Units	Max Units	Long Description
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OR	3800	Introduction to Management Science	3.00	3.00	Fall, Spring, Summer. Introduces various quantitative approaches for modeling and solving business problems. Topics include linear programming models and solution methods, problem formulation via integer and goal programming, decision analysis under uncertainty and simulation. Prerequisites: MIS 2000 and STAT 2110 or STAT 2200. Extra fee.
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OR	4820	Computer Simulation of Management Systems	3.00	3.00	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.
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Subject: Peace & Conflict Studies	Number	Long Course Title	Min Units	Max Units	Long Description
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PACS	2000	Introduction to Peace and Conflict Studies	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	1.00	3.00	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	1.00	3.00	Internship or directed study involving examination of Peace and Conflict issues in the community. Prerequisite: consent of supervising instructor. May be repeated to 6 hours.

Subject: Physical Education, General	Number	Long Course Title	Min Units	Max Units	Long Description
PEG	1000	Physical Education General	1.00	1.00	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	1.00	1.00	Fall, Spring, Summer. Develops knowledge, understanding and skills pertinent to the activity. Most activities are coeducational. Offerings vary each term. May be taken for grade or S/U.
PEG	2040	Aerobic Dance	1.00	1.00	Activity course.

PEG	2070	Badminton	1.00	1.00	Fall, Spring. Instruction and training in the principles, knowledge, and skills pertinent to beginning badminton.
PEG	2080	Basketball	1.00	1.00	Fall, Spring. Development of skills, knowledge, and strategies of basketball.
PEG	2110	Bowling	1.00	1.00	Fall, Spring. Instruction and training in the principles, knowledge, and skills pertinent to beginning bowling. Extra fee.
PEG	2170	Cycling	1.00	1.00	Fall, Spring. Instruction and training in the principles, knowledge, and skills of cycling.
PEG	2180	Curling	1.00	1.00	Activity course. Extra fee.
PEG	2220	Classical Ballet I	1.00	1.00	Activity course.
PEG	2230	Classical Ballet II	1.00	1.00	Activity course.
PEG	2240	Classical Ballet III	1.00	1.00	Activity course.
PEG	2300	Modern Dance I	1.00	1.00	Activity course.
PEG	2310	Modern Dance II	1.00	1.00	Activity course.
PEG	2320	Modern Dance III	1.00	1.00	Activity course.
PEG	2340	Tap Dance II	1.00	1.00	Activity course.
PEG	2400	Exercise and Conditioning	1.00	1.00	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	1.00	1.00	Activity course. Extra fee.
PEG	2420	Intermediate Fencing	1.00	1.00	Activity course.
PEG	2430	Fitness Walking	1.00	1.00	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	1.00	1.00	Activity course.
PEG	2460	Golf	1.00	1.00	Activity course. Extra fee.
PEG	2470	Intermediate Golf	1.00	1.00	Fall, Spring. Instruction and training in the principles, knowledge, and skills pertinent to intermediate golf. Extra fee.
PEG	2480	Advanced Golf	1.00	1.00	Activity course. Extra fee.
PEG	2510	Handball	1.00	1.00	Activity course.
PEG	2530	Basic Hockey	1.00	1.00	Activity course. Extra fee.

PEG	2580	Water Aerobics	1.00	1.00	Activity course.
PEG	2600	Beginning Ice Skating	1.00	1.00	Activity course. Extra fee.
PEG	2610	Figure Skating	1.00	1.00	Activity course. Extra fee.
PEG	2630	Jogging	1.00	1.00	Activity course.
PEG	2640	Karate	1.00	1.00	Activity course.
PEG	2650	Racquetball	1.00	1.00	Fall, Spring. Instruction and training in the principles, knowledge, and skills pertinent to beginning racquetball.
PEG	2660	Intermediate Racquetball	1.00	1.00	Activity course.
PEG	2680	Self Defense	1.00	1.00	Activity course.
PEG	2710	Soccer	1.00	1.00	Activity course.
PEG	2720	Intermediate Soccer	1.00	1.00	Activity course.
PEG	2750	Softball - Coed	1.00	1.00	Activity course.
PEG	2760	Squash	1.00	1.00	Activity course.
PEG	2780	Life Guard Training	1.00	1.00	Activity course. Extra fee.
PEG	2800	Beginning Swimming	1.00	1.00	Activity course. Extra fee.
PEG	2810	Intermediate Swimming	1.00	1.00	Activity course. Extra fee.
PEG	2820	Advanced Swimming	1.00	1.00	Activity course. Extra fee.
PEG	2830	Tennis	1.00	1.00	Activity course.
PEG	2860	Volleyball	1.00	1.00	Activity course.
PEG	2870	Weight Training	1.00	1.00	Activity course.
PEG	2910	Tension Management	1.00	1.00	Activity course.
Subject: Philosophy	Number	Long Course Title	Min Units	Max Units	Long Description
PHIL	1010	Introduction to Philosophy	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	Fall or Spring. Study of contemporary moral problems with a focus on what values are and how they differ from facts. Topics may include abortion, promise-keeping, mercy killing, academic dishonesty, and animal rights. Credit not given for both PHIL 1250 and PHIL 1020. Applicable to the BG Perspective (general education) humanities and arts requirement.
PHIL	2020	History of Ethics	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	Fall and Spring. Philosophical foundations of legal system; essential nature of law and relation to morality; liberty, justice and legal responsibility (intention, human causality, negligence, mens rea, fault, etc.) and punishment.
PHIL	2190	Philosophy of Death and Dying	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	Fall and Spring. Basic theories of punishment and whether punishment is justified. Issues include punishment versus rehabilitation, capital punishment, the insanity defense and related issues. Applicable to the BG Perspective (general education) humanities and arts requirement. Approved for Distance Ed.
PHIL	2300	Scientific Reasoning	3.00	3.00	Fall or Spring. Study of the scientific method which develops skills for interpreting scientific findings and evaluating theories, tests and causal and statistical claims. One component deals with decision-making procedures based on these evaluations. No prerequisites. Applicable to the BG Perspective (general education) humanities and arts requirement.
PHIL	2360	Philosophy of Film	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	Fall or Spring. Topics covered will include some of the nature of mental phenomena, the relation between minds and bodies, free will, the relationship between thought and action, and the problem of other minds. Prerequisite: 3 hours in Philosophy.

PHIL	3110	History of Medieval Philosophy	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	Fall or Spring. Nature of religion; gods and/or God; faith, revelation and religious belief; evil and righteousness; meaning of life. Readings from variety of sources, largely contemporary. Prerequisite: three hours in PHIL or consent of instructor.
PHIL	3210	Indian and Chinese Philosophy	3.00	3.00	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	3.00	3.00	Alternate years. Theories of knowledge, truth, belief and evidence. Prerequisite: three hours in PHIL or consent of instructor.
PHIL	3310	Existentialism	3.00	3.00	Alternate years. Various existential themes, including the meaning of life, human freedom, the limits of reason, the meaning of death and the individual vs. society. Kierkegaard, Nietzsche, Dostoevsky, Camus, Sartre, Jaspers, Buber and others comprise the reading. Prerequisite: three hours in PHIL or consent of instructor.
PHIL	3320	Environmental Ethics	3.00	3.00	Fall or Spring. Critical evaluation of prevalent standards used in responding to long-standing and emerging environmental problems. Prerequisite: three hours in PHIL or consent of instructor. Applicable to the BG Perspective (general education) humanities and arts requirement.

PHIL	3390	Meditation: Practice and Theory	3.00	3.00	Fall or Spring. Integrate insight (mindfulness) meditation practice with theoretical reflection about a variety of meditation techniques and practices that have been developed in diverse meditation traditions. Weekend field trip required. Prerequisite: three hours in PHIL or consent of instructor. Extra fee.
PHIL	3400	Problems in Philosophy	3.00	3.00	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	3.00	3.00	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	1.00	4.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	Alternate years. An in-depth treatment of some theme(s) in moral philosophy. Topics may include classic and contemporary debates in metaethics, normative ethical theory, and/or applied ethics. Prerequisite: 6 hours in PHIL or consent of instructor.
PHIL	4310	Topics in Philosophy of Science	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	Fall or Spring. Extended research project on a topic of the student's choice. The focus will be on formulating a thesis and pursuing appropriate means of developing it in a research project. Class meetings will focus on research methodologies and on students' discussion of their projects. Collaborative learning is required. Prerequisite: required of all philosophy majors with senior standing. Open to others by permission of the instructor.
PHIL	4420	Philosophy of Medicine	3.00	3.00	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	3.00	3.00	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	1.00	3.00	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	3.00	3.00	On demand. In-depth examination of one specific philosopher, philosophic movement or problem. Determined by need and interest of student. Prerequisite: six hours in PHIL or consent of instructor. May be repeated.

Subject: Physics	Number	Long Course Title	Min Units	Max Units	Long Description
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PHYS	1000	Physics of Natural World	3.00	3.00	Summer. Survey course for non-science majors. Elementary description of major physics concepts and principles with contemporary applications. Not acceptable toward physics major or minor. Applicable to the BG Perspective (general education) natural sciences requirement.
PHYS	1010	Basic Physics	3.00	3.00	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	1.00	3.00	On demand. Selected topics not included in existing courses at the introductory level. Scheduling of course may be initiated by staff or students. May be repeated as different subjects are offered. Prerequisite: consent of instructor.
PHYS	2010	College Physics I	5.00	5.00	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	5.00	5.00	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	5.00	5.00	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	5.00	5.00	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	1.00	3.00	On demand. Introduction to research in physics and astronomy; projects chosen in consultation with adviser. May include library and laboratory work. For lower-division students only. Prerequisite: consent of instructor. May be repeated.
PHYS	3010	Modern Physics	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	1.00	1.00	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	1.00	1.00	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	2.00	2.00	Spring alternate years. Current topics in astronomy, which may include solar system exploration, extrasolar planets, pulsars, gravitational collapse and black holes, galaxies, large-scale structure in the universe, active galaxies and quasars, and cosmology. Prerequisites: PHYS 2020 or PHYS 2120; ASTR 2010. Not open to students with credit for ASTR 3210.

PHYS	3500	Musical Acoustics	3.00	3.00	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	3.00	3.00	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	1.00	3.00	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	1.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	Spring alternate years. Continuum and atomic theories of solids, lattice vibrations, specific heat of solids, electron theory of metals and semi-conductors. Superconductivity. Three lecture-recitations. Prerequisites: PHYS 3020.
PHYS	4160	Classical Mechanics	3.00	3.00	Fall alternate years. Newtonian particle mechanics in one, two and three dimensions; non-inertial reference frames. Central forces and celestial mechanics. Dynamics of a system of particles; rigid body motion. Lagrangian and Hamiltonian formulations of dynamics. Theory of small oscillations. Three lecture/recitations. Corequisite: PHYS 4010.
PHYS	4170	Quantum Mechanics	3.00	3.00	Spring alternate years. Duality of matter and radiation, state functions and interpretation. Heisenberg uncertainty principle, wave equations and principles of wave mechanics, elementary applications of Schroedinger's equation, operator methods and approximation techniques. Prerequisites: PHYS 3010, PHYS 4010.
PHYS	4180	Electricity and Magnetism	3.00	3.00	Fall alternate years. Electric and magnetic fields; Maxwell's theory of electromagnetic field with applications in propagation, absorption, reflection, transmission of radiation. Prerequisite: MATH 2330. Corequisite: PHYS 4010.
PHYS	4330	Philosophy and Physics of Space and Time	3.00	3.00	Spring alternate years. Physical theories of space and time from philosophical, scientific and historical points of view. Topics include Zeno's paradoxes, Greek concepts of space and time, classical Newtonian world view, general ideas of modern theory of relativity and cosmology. Course presupposes high school-level mathematics only. Cross-disciplinary; cross-listed as PHIL 4330. Prerequisite: three hours in PHIL; three hours in either PHIL, MATH, or PHYS; or consent of instructor.
PHYS	4700	Independent Study	1.00	3.00	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	1.00	3.00	On demand. Readings and research on recently developing topics chosen to fit needs of students. May be repeated.
Subject: Political Science	Number	Long Course Title	Min Units	Max Units	Long Description
POLS	1100	American Government: Processes and Structure	3.00	3.00	Fall, Spring, Summer. Constitutional basis and development, political processes (parties, nominations and elections, interest groups and public opinion), federalism and institutions of national government. Applicable to the BG Perspective (general education) social sciences requirement.
POLS	1710	Introduction to Comparative Government	3.00	3.00	Fall, Spring, Summer. 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.
POLS	1720	Introduction to International Relations	3.00	3.00	Fall, Spring, Summer. Historical and contemporary overview of the modern international system; governmental and nongovernmental actors influencing international relations; major issues of the post-cold-war period. Applicable to the BG Perspective (general education) social sciences and international perspective requirements.
POLS	2900	Introduction to Political Inquiry	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	Fall, Spring, Summer. American administrative system: emphasis on administrative structures and processes; relationship between elected offices and bureaucracy, notion of civil service, modes of managing administrative system. Prerequisite: POLS 1100.
POLS	3040	American Political Thought	3.00	3.00	As reflected in colonial, Federalist, Civil War and late 19th century political thought.
POLS	3310	State and Local Government	3.00	3.00	Fall, Spring. Influence of culture and socioeconomic factors on state and local politics; state constitutions, municipal corporations and charters; political participation; institutions and processes; intergovernmental relations; policy issues and outcomes in state/local government with special reference to Ohio.
POLS	3350	Global Resource Politics	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	Spring. Legislative behavior and decision making; forces involved in formation of public policy; proposed reforms of Congress. Prerequisite: POLS 1100 or consent of instructor.
POLS	3460	Presidency and Executive Process	3.00	3.00	Fall. Organization, functions and powers of office of president and vice president; roles and presidential leadership psychology.
POLS	3470	Judicial Process	3.00	3.00	American judiciary, particularly Supreme Court, as political institution; decision-making process and interaction of courts with rest of political system.

POLS	3510	Western European Politics	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	Fall. Influence of cultural and socio-economic factors on politics; violence and revolution; role of major interest groups such as the military, labor, the Catholic Church; political parties and elections; institutions; focus on selected nation-states.
POLS	3610	Governments and Politics of Middle East	3.00	3.00	Governmental and political processes of Turkey, Iran, Israel, Egypt, other selected Middle Eastern and North African political systems; major developmental problems of the area.
POLS	3660	Governments and Politics of Asia	3.00	3.00	Representative contemporary Far Eastern and Southeast Asian political systems; how ideology, religion, militarism and other social forces (both endogenous and exogenous) have influenced the development of these policies.
POLS	3720	Contemporary World Politics	3.00	3.00	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 Ed.

POLS	3740	American Foreign Policy Process	3.00	3.00	Fall. Nature and conduct of contemporary U.S. foreign policy, with particular emphasis on the roles that the executive and legislative branches play in the process. Secondary foci of analysis are how domestic political problems, interest groups, military alliances, technological and economic forces help shape foreign policy formation and articulation.
POLS	4000	Topics in Political Science	1.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	Fall. Supreme Court cases relating to U.S. governmental structure, powers and relationships.
POLS	4170	Constitution Law: Procedural Rights	3.00	3.00	Due process, right to counsel, search and seizure, electronic surveillance and jury trial.
POLS	4180	Constitution Law: Substantive Rights	3.00	3.00	Spring. Freedom of speech, press and religion; equal protection of law, travel and privacy, and right to vote.
POLS	4190	Jurisprudence	3.00	3.00	Leading theories and theorists of law; Anglo-American thought and practice.
POLS	4200	Administrative Law	3.00	3.00	Fall. Legal aspects of the administrative process and the effect of legal principles and processes upon administrative decision making. Emphasis on the limitation of administrative discretion and the judicial review of administrative decisions. Prerequisite: consent of instructor.

POLS	4210	Bureaucratic Politics	3.00	3.00	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	3.00	3.00	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	3.00	3.00	Selected areas of current concern in constitutional law; substantive knowledge of relevant case law, scholarly legal journals which attempt to predict outcome of future constitutional litigation. Prerequisite: POLS 4170 or POLS 4180.
POLS	4250	Constitutional Law Advocacy	3.00	3.00	Substantive knowledge of one area in constitutional law; practical skills necessary for constitutional adjudication; techniques of legal research, writing appellate court briefs and appellate court advocacy. Prerequisites: POLS 4160 and POLS 4170, or POLS 4180 and permission of instructor.
POLS	4300	Local Government Management and Politics	3.00	3.00	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	3.00	3.00	Democracy and political parties, party organization, primaries and conventions for nomination, campaigns and elections, patterns of election participation and factors affecting the voter's decision making.
POLS	4430	Politics and the Mass Media	3.00	3.00	Political analysis of relationships between the media and the government and the effects on public policy issues and electoral campaigns.
POLS	4540	Politics of Post-Communist States	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	1.00	3.00	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	3.00	3.00	Alternate Spring. History, nature, sources and applications; relationship between law and society at international level.
POLS	4750	International Organization	3.00	3.00	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	3.00	3.00	Fall. Survey and analysis of political economy on a global scale, including review of major Marxist, realist and liberal theories and policy issues of trade, debt, investment and aid.
POLS	4780	International Conflict	3.00	3.00	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	3.00	3.00	Fall (alternate years). Theories and research on the resolution of political conflicts in individual, bureaucratic, societal, and interstate settings. Techniques of conflict resolution including coercion, negotiation, and nonviolence. Application of theories to cases of political conflict.
POLS	4910	Seminar for Intern	3.00	3.00	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	1.00	3.00	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	1.00	8.00	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	1.00	4.00	On demand. Intensive educational experience on selected topics in political science. May be repeated if topics differ, on approval of adviser. No more than nine hours of POLS 4960 (formerly POLS 395) will count toward a major or minor in political science.

Subject: Popular Culture	Number	Long Course Title	Min Units	Max Units	Long Description
POPC	1600	Introduction to Popular Culture	3.00	3.00	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	3.00	3.00	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	3.00	3.00	Fall, Spring, Summer. Basic theories of approaches to 20th century African-American popular culture. Traces ways black popular culture has shaped and is shaped by American society. Examines relationship of race, ethnicity, gender and class. Applicable to the BG Perspective (general education) cultural diversity in the United States requirement.
POPC	2200	Introduction to Folklore and Folklife	3.00	3.00	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	1.00	3.00	Study of theme, era or issue in popular culture. Subject matter designated in class schedule. May be repeated once if topics differ.

POPC	2500	Introduction to Popular Film	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	Fall or Spring. Relationship between popular television programming and American society; viewing of appropriate television.
POPC	3000	Topics in International/Global Popular Culture	3.00	3.00	On demand. In-depth study of international and/or global aspects of everyday life and popular culture: consumer culture, mass media, entertainment, migration, technology, etc. Areas may include Ireland, China, Taiwan, Japan, and Canada. May be repeated to nine hours if topics differ.
POPC	3200	Folktale and Legend	3.00	3.00	Alternate years. Intensive examination and collecting of oral narratives; theory and methods of collecting, organizing and interpreting such material as folktales, urban belief tales, supernatural legends, narrative jokes, tall tales, etc.; analysis of folk mythology.
POPC	3210	Folklife and Material Culture	3.00	3.00	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	3.00	3.00	Alternate years. Intensive study of a single folk group or the folklore of a specific region (e.g., Women's Folk Culture, Folklore of the Great Lakes Region, etc.). Emphasis on the function of various types of folklore within the group or region. May be repeated once if content clearly differs.
POPC	3500	Advanced Studies in Popular Film	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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.
POPC	3950	Workshop on Current Topics	1.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	In-depth study of particular problem: development of hero in popular arts, cultural analysis of popular film, cultural analysis of popular music, etc. May be repeated once if subject matter is different.
POPC	4700	Studies in Popular Literature	3.00	3.00	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	3.00	3.00	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	2.00	2.00	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	1.00	3.00	For advanced student. Independent study. Prerequisites: six hours of POPC courses and consent of department chair and instructor by 12th week of semester preceding the term in which the course is to be taken. May be repeated to eight hours.

Subject: Psychology	Number	Long Course Title	Min Units	Max Units	Long Description
PSYC	1010	General Psychology	4.00	4.00	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	1.00	3.00	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	4.00	4.00	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	4.00	4.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	On demand. Major concepts, theories and principles of adolescent development. Prerequisite: PSYC 1010.
PSYC	3050	Psychology of Personality Adjustment	2.00	2.00	Problems of personal adjustment. Related problems of theory and measurement of personality. Prerequisite: PSYC 1010.
PSYC	3060	Psychology of Gender	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	Fall. Research and theories of human development across the entire lifespan. Discussion of how biological, cognitive, and social processes affect human development from conception to death. Prerequisite: PSYC 1010.
PSYC	3110	Social Psychology	3.00	3.00	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	4.00	4.00	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	4.00	4.00	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	4.00	4.00	Principles and theories of human learning and memory, applied to the acquisition of knowledge and skills. Three lecture hours; two laboratory hours. This course can be applied toward satisfying the laboratory requirement of the psychology major. Prerequisites: PSYC 2700, PSYC 2900. PSYC 3020 is strongly recommended.
PSYC	3220	Cognitive Psychology II: Thinking and Problem Solving	4.00	4.00	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	4.00	4.00	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	4.00	4.00	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	3.00	3.00	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 PYSC 3300 and BIOL 3300.
PSYC	3310	Psychopharmacology and Clinical Neuroscience	3.00	3.00	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	4.00	4.00	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	4.00	4.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	4.00	4.00	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	3.00	3.00	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	4.00	4.00	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	4.00	4.00	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	1.00	3.00	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	1.00	5.00	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	3.00	3.00	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	3.00	3.00	Fall, Spring, Summer. Data and concepts used in understanding, labeling and modifying deviant behavior. Prerequisite: PSYC 1010.
PSYC	4060	Developmental Psychopathology	3.00	3.00	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	3.00	3.00	Religion and spirituality from a psychological perspective. Religion and motivation, development, conversion, altruism, coping, mental health, psychotherapy. Prerequisite: PSYC 1010.
PSYC	4400	General Seminar	1.00	4.00	Specific content areas offered depends on demand and interest of staff. May be repeated three times. Prerequisite: consent of instructor.
PSYC	4520	Personnel Selection	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	1.00	3.00	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	1.00	3.00	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	3.00	3.00	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	3.00	3.00	Spring. Seminar in general psychology for senior major. Student required to plan and carry out research project under direction of faculty member. Prerequisite: senior major, approval by department undergraduate committee.

Subject: Public Health	Number	Long Course Title	Min Units	Max Units	Long Description
PUBH	2100	Introduction to Community Health	3.00	3.00	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	3.00	3.00	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 Ed.
PUBH	3020	Applied International Health	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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 Ed.
PUBH	3700	Sexually Transmitted Diseases	3.00	3.00	Review of current scientific literature regarding HIV infection and pathobiology with emphasis on immunological aspects of infection and diseases associated with AIDS. Includes mode of transmission, prevalence, pathobiology, and treatment of other sexually transmitted diseases. Prerequisite: BIOL 2050 or permission.
PUBH	4030	Issues in Global Health	3.00	3.00	Fall term. Course examines current issues and trends that affect international health, including delivery systems in other countries, and examines a variety of environmental, economic, and political factors that play a role in the transmission and treatment of human diseases. Prerequisite: PUBH 3010 or consent of instructor. Students who complete this course may not receive credit for PUBH 5030.
PUBH	4800	Seminar in Public Health	1.00	4.00	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	1.00	4.00	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	3.00	3.00	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	3.00	3.00	On demand. Supervised internship experience in public health. May be repeated if topics differ. Prerequisite: consent of instructor.

Subject: Quality Systems	Number	Long Course Title	Min Units	Max Units	Long Description
QS	2650	Introduction to Lean Processes/Systems	3.00	3.00	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	3550	Foundations of Lean	3.00	3.00	Fall. Foundations of quality improvement systems applied for variation and waste reduction and productivity enhancement for lean six sigma manufacturing and non-manufacturing environments. Team-based project configuring e-portfolio in ISO infrastructure. Web based.
QS	3600	Six Sigma Systems	3.00	3.00	Spring. Data-based systems for improvement including statistical process control using variable and attribute data, capability measurement analysis, and cost and other data gathering for lean and six sigma manufacturing and non-manufacturing environments. Team-based project configuring e-portfolio in ISO 9000 infrastructure. Prerequisites: ENGT 1000 or MFG 1120, STAT 2000 or higher.
QS	3700	Quality Change Services	3.00	3.00	Summer. Quality environment for change and improvement, emphasizing technological and cultural issues associated with servicing customers from a lean six sigma supplier perspective in both manufacturing and non-manufacturing circumstances. Team-based project configuring e-portfolio in ISO 9000 infrastructure. Prerequisites: QS 3600 and QS 3650.

QS	3800	Lean Six Sigma	3.00	3.00	An overview of the dynamic relationship of lean and six sigma principles combined. Analysis of core values and tools inherent in lean and six sigma, with a key emphasis on how they have influenced production. Team-based project configuring e-portfolio in ISO 9000 infrastructure. Prerequisites: QS 3600 and QS 3650.
QS	4600	Synchronous Quality Planning	3.00	3.00	Summer. Planning and developing new product platform while doing existing quality responsibilities via mature lean six sigma data and documentation in manufacturing or non-manufacturing environments. Team-based project configuring e-portfolio in ISO 9000 infrastructure. Prerequisites: QS 3600 and QS 3650.
QS	4650	Leadership for Lean Six Sigma	3.00	3.00	Leadership focus around individual tools and techniques as foundation of continuous improvement in the lean and six sigma environment. The scientific application of common lean and six sigma tools will be applied as a transformational and improvement strategy. Team-based project configuring e-portfolio in ISO 9000 infrastructure. Prerequisites: QS 3600 and QS 3650.
QS	4700	Kaizen Project	3.00	3.00	Kaizen environment where time, elements of motion and flow, work measurement, machine controlled operations, plant layout, lead time, cellular organization, balancing and leveling are analyzed to create value added instructions to change movement or motion into work and reduce variation based on data collected. Team-based project configuring e-portfolio in ISO 9000 infrastructure. Prerequisites: QS 3600, QS 3650, QS 3700, QS 3800.

Subject: Radiologic Technology	Number	Long Course Title	Min Units	Max Units	Long Description
RADT	1000	Fundamentals of Radiography	2.00	2.00	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	2.00	2.00	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	1.00	1.00	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	2.00	2.00	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	1.00	1.00	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	1.00	1.00	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	1240	Processing Methods	2.00	2.00	Introduces knowledge in processing of images, areas of consideration and functions. Standard Wet and Dry processors are discussed as well as digital processing. In depth lecture of algorithms, histograms and post processing image manipulation is included. Approved for Distance Ed.
RADT	1410	Radiation Physics I	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	1.00	1.00	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 Ed.
RADT	2420	Radiation Biology	2.00	2.00	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	2.00	2.00	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	2.00	2.00	Spring. Introduces theories of disease causation and the pathophysiologic disorders that compromise health systems. Etiology, pathophysiologic responses, clinical manifestations, radiographic appearance and management of alterations in body systems are presented. Includes image analysis and adaptation for pathologic conditions. Two hours lecture. Prerequisites: RADT 2420 and RADT 2430.
RADT	2520	Quality Assurance	2.00	2.00	Spring. Principles and concepts of quality assurance (QA) and quality control (QC) are presented. The Center for Devices and Radiological Health program recommendations are discussed. System component parameters and basic QA/QC tests are described. Includes demonstrations and simulations. QA program design is also presented. Two hours lecture. Prerequisites: RADT 1230, RADT 2410, and RADT 2430.
RADT	2810	Directed Practice	4.00	4.00	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	4.00	4.00	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	4.00	4.00	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	1.00	3.00	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 Ed.

Subject: Rehabilitation Counseling	Number	Long Course Title	Min Units	Max Units	Long Description
REHB	4010	Introduction to Rehabilitation Counseling	3.00	3.00	Characteristics and principles of the rehabilitation process; disabilities and agencies serving the disabled.

Subject: Residential Center	Number	Long Course Title	Min Units	Max Units	Long Description
RESC	2000	Field Experiences	1.00	1.00	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	1.00	3.00	Fall, Spring, Summer. For students who want to conduct intensive study of selected problems related to goals of Chapman Learning Community. For undergraduate credit only. Prerequisite: consent of director of Chapman Learning Community. May be repeated up to six credit hours.

Subject: Respiratory Care	Number	Long Course Title	Min Units	Max Units	Long Description
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RESP	1050	Introduction to Respiratory Care	2.00	2.00	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	3.00	3.00	Basic scientific principles of gases, humidity, aerosols and fluid flow as applied to respiratory care. Devices for measuring oxygen levels and regulating pressure and flow of therapeutic gases, as well as equipment for delivering humidity and medical aerosols. Therapeutic application of respiratory care equipment. Basic patient care and assessment. Medical terminology. Two hours of lecture and three hours of lab. Prerequisite: Admission into program. Extra fee.
RESP	1210	Principles of Respiratory Care II	3.00	3.00	Introduction to cardiopulmonary disease. Patient assessment, hyperinflation therapy, bronchopulmonary hygiene. Isolation procedures. Pulmonary function testing. Sterilization and processing of respiratory equipment. Two hours of lecture and three hours of lab. Prerequisite: Program matriculation. Offered at Firelands only. Extra fee.
RESP	2020	Cardiopulmonary/Renal Anatomy and Physiology	3.00	3.00	Anatomy and physiology of respiratory, cardiovascular, renal systems in depth. Ventilatory mechanics, pulmonary functions, control of respiration, gas diffusion, transport and exchange, acid-based balance, fluid and electrolyte balance, blood gas interpretation. Three hours of lecture. Prerequisite: RESP 1200, AHTH 1310 or BIOL 3310, BIOL 3320, CHEM 1090/CHEM 1100 or permission of instructor. Corequisite: RESP 1210.
RESP	2030	Pulmonary Pathophysiology	3.00	3.00	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	4.00	4.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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, PFTs, ABGs, and CPR. Minimum of 225 hours contact time. Prerequisites: All pre-professional requirements for respiratory care and permission of instructor. Offered at Firelands only.
RESP	2600	Cases and Reviews in Respiratory Care	2.00	2.00	Development of general critical thinking skills: interpretation, analysis, inference, explanation, evaluation and self-regulation with respiratory care application. Focus is on development and modification of respiratory care plans using clinical practice guidelines. Designed also to enhance success on clinical simulation examinations. May be repeated to six hours. Prerequisite: must meet program matriculation standards or permission of instructor.

RESP	2610	Respiratory Care Directed Practice	2.00	2.00	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	3.00	3.00	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	3.00	3.00	Continuation of procedures with the addition of neonatal and pediatric respiratory care. Minimum of 225 hours contact time. Prerequisites: RESP 2710 and RESP 2400. Extra fee.
RESP	2900	Special Topics in Respiratory Care	1.00	3.00	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	2.00	2.00	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	2.00	2.00	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)	3.00	3.00	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	3.00	3.00	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	3.00	3.00	Supervised field experience in an approved sub-specialty setting combined with a seminar designed to integrate planning, theory, and practice. One of two capstone courses to the Bachelor of Applied Health Science, Respiratory Care Specialization. Emphasis on application rather than observation. Prerequisite: permission of instructor. Minimum 2.50 GPA prior to registration. Two (2) credit hours field experience; One (1) credit hour seminar.
RESP	4720	Capstone Experience and Seminar II	3.00	3.00	The second of two capstone courses for the Bachelor of Applied Health Science, Respiratory Care Specialization. Supervised field experience in an approved sub-specialty setting combined with a seminar designed to integrate planning, theory, and practice. Emphasis on application rather than observation. Prerequisite: permission of instructor. Minimum 2.50 GPA prior to registration. Two (2) credit hours field experience; One (1) credit hour seminar.

Subject: Romance & Classical Studies	Number	Long Course Title	Min Units	Max Units	Long Description
ROCS	2000	European and Latin American Cinema	3.00	3.00	Films of cultural and literary significance from Mediterranean and Latin American countries seen through study of selected topics, themes or movements. Taught in English. Includes viewing of films with subtitles. Extra fee.

ROCS	2200	African Literature	3.00	3.00	Fall. Creative and Critical writing in the English language by writers of African descent. Also writers of the Caribbean. Credit allowed for only one of ROCS 2200 or ETHN 2200.
ROCS	4700	Readings in Romance Languages and Literature	1.00	3.00	Independent reading for advanced students wishing to conduct comparative study in particular period, author or authors, problem or genre. Prerequisites: consent of chair of department and instructor.

Subject: Russian	Number	Long Course Title	Min Units	Max Units	Long Description
RUSN	1010	Elementary Language and Culture I	4.00	4.00	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	4.00	4.00	RUSN 1010 continued. Four class periods and laboratory practice each week. Increased use of authentic reading materials. Completion of elementary grammar study. Prerequisite: RUSN 1010 or one year of high school Russian, or by placement. Applicable to the BG Perspective (general education) humanities and arts and international perspective requirements.
RUSN	1170	Conversation and Pronunciation I	1.00	1.00	Oral practice for beginning students. Concurrent enrollment in RUSN 1010 or RUSN 1020 recommended. May be repeated to three hours.
RUSN	1180	Conversation and Pronunciation II	1.00	1.00	Oral practice for intermediate students. Concurrent enrollment in RUSN 2010 or RUSN 2020 recommended. May be repeated to three hours.
RUSN	2000	Study Abroad I	2.00	6.00	Intermediate in-country Russian language training. Prerequisite: RUSN 1020 or equivalent. May be repeated up to 12 hours.
RUSN	2010	Intermediate Russian I	4.00	4.00	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	4.00	4.00	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	3.00	3.00	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 ed.
RUSN	2160	Contemporary Russian Society	3.00	3.00	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	2.00	6.00	Advanced in-country Russian language training. Prerequisite: RUSN 2020 or equivalent. May be repeated up to 12 hours.
RUSN	3120	Introduction to Russian Literature	3.00	3.00	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	3.00	3.00	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	3.00	3.00	Fall. Mastery of conversation and writing for personal and preprofessional needs. Corresponding aspects of contemporary culture. Advanced grammar review. Prerequisite: RUSN 2020 or by placement.
RUSN	3180	Composition and Conversation II	3.00	3.00	Spring. RUSN 3170 continued. Prerequisite: RUSN 3170.

RUSN	3200	Readings in Russian Culture	2.00	2.00	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	2.00	2.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	Russian dramatic art and the theater in Russian culture since the 18th century. Emphasis on post-Chekavian (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	3.00	3.00	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	3.00	3.00	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	2.00	2.00	Advanced skills for reading the media in Russian. Prerequisite: RUSN 2020 or consent of instructor.
RUSN	4800	Selected Topics	1.00	3.00	Topic chosen to meet curriculum needs and student requests. May be repeated to six hours. Prerequisite: RUSN 2020.
RUSN	4910	Studies in Russian	1.00	3.00	Independent reading for the advanced student. Prerequisites: arrangement with instructor and consent of department chair prior to registration. May be repeated.

Subject: Earth, Environment & Society	Number	Long Course Title	Min Units	Max Units	Long Description
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SEES	3000	Geospatial Science	3.00	3.00	Introduction to geospatial science including GIS, remote sensing, and GPS, and their applications to the social and natural sciences. Two lectures and one two-hour lab.
SEES	4800	Seminar in Earth, Environment & Society	1.00	3.00	Fall, Spring. Systematic study of selected topics that bridge the disciplines of geology, geography, and environmental studies. May be repeated.

Subject: Sport Management	Number	Long Course Title	Min Units	Max Units	Long Description
SM	2010	Introduction to Sport Management	3.00	3.00	Basic concepts of sport management; career preparation; professional opportunities. Prerequisite: Declared sport management major.
SM	2140	Introduction to Research in HMSLS	3.00	3.00	Identification and evaluation of research problems; interpretation of research in sport management, exercise science, human movement science, leisure, and athletic training; basic statistical analysis and interpretation. Prerequisites: GSW 1120 and MATH 1120 or higher.
SM	2210	History and Philosophy of Sport	3.00	3.00	Major historical and philosophical developments in sport.
SM	3010	Sport and Event Management	3.00	3.00	Processes for managing sport and event enterprises. Roles and skills used by sport and event managers. Prerequisite: C or better in SM 2010 or ATCM 2020 or KNS 2270. May be repeated.
SM	3050	Sport and Event Promotion	3.00	3.00	Fundamental promotional principles used in marketing sport and event services and products. Focus on strategies of information-based promotional campaigns related to sport and event management. Prerequisites: C or better in MKT 3000 and C or better in either SM 2010 or KNS 2270.
SM	3650	Foundations of Sport Psychology	3.00	3.00	Nonclinical approach for athletes, teachers and coaches regarding the role of psychological aspects of human behavior as it affects performance in sport and physical activity; psychological well-being, interpersonal skill development and fitness adherence also emphasized. Prerequisite: PSYC 1010.
SM	3660	Psychological Aspects of Exercise and Fitness	3.00	3.00	Psychological considerations of exercise and fitness, psychological techniques to enhance adherence to fitness/rehabilitation programs and to enhance coping with exercise related injury. Prerequisite: PSYC 1010.

SM	3750	Sport and Public Assembly Facilities	3.00	3.00	Designing, planning, managing public and private sport and other public assembly facilities. Prerequisites: SM 3870 and junior standing.
SM	3870	Practicum in Sport Management	1.00	5.00	Under supervision of sport management division of school of HMSLS, petitioning required before registration; credit hours approved separately by program area. Prerequisites: formal matriculation for sport management majors and approval of appropriate division faculty for sport management and ATCM majors. Professional liability insurance required for ATCM majors. May be repeated up to 5 hours. Extra fee.
SM	3900	Legal Aspects of Sport and Recreation	3.00	3.00	Negligence liability; control of amateur, professional and school sport; violence/crowd control; product liability; risk management; selected current issues. Prerequisite: junior standing.
SM	3950	Workshop on Current Topics	1.00	3.00	On demand. Intensive educational experience in selected topics related to skill development, content update or material development; typically, an all-day or similar concentrated time format. May be repeated.
SM	4250	Sport and Gender	3.00	3.00	Cultural, social-psychological and physiological considerations associated with gender and participation in sport and physical activity. Prerequisite: junior standing.
SM	4500	Managing Revenues and Expenditures in Sport Enterprise	3.00	3.00	Focuses on generating revenue and supervising spending in sport organizations. Special attention is given to resource management and operations unique to the sport environment. Prerequisites: SM 2010, SM 3050, and matriculation into the Sport Management major.
SM	4700	Independent Study in Sport Management	1.00	3.00	In-depth study project of a topic of particular significance to the student; project must be approved by project supervisor and program area chair prior to registration; may be repeated. Prerequisite: permission of supervisor and program chair.
SM	4870	Practicum in Sport Management	1.00	5.00	Under supervision of sport management division of School of HMSLS, petitioning required before registration; credit hours approved separately by program area. Prerequisites: SM 3870 and approval of appropriate division faculty. Professional liability insurance required for ATCM majors. May be repeated up to 5 hours. Extra fee.

SM	4890	Internship in Sport Management	15.00	15.00	Field experience for sport management and ATCM majors only. Petitioning required before registration. Prerequisites: 52 hours in major field, satisfactory completion of SM 3870, GPA of 2.5 or above, an average of 2.7 or above in the major field and approval of appropriate division faculty. ATCM majors must also complete KNS 3130. Professional liability insurance required for ATCM majors. Extra fee.
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Subject: Sociology	Number	Long Course Title	Min Units	Max Units	Long Description
SOC	1010	Principles of Sociology	3.00	3.00	Fall, Spring, Summer. Elements and concepts of social organization, social change and group relationships. Applicable to the BG Perspective (general education) social sciences requirement.
SOC	2020	Social Problems	3.00	3.00	Fall, Spring, Summer. Sociological analysis of contemporary social problems. Prerequisite: SOC 1010. Applicable to the BG Perspective (general education) social sciences requirement.
SOC	2100	Sociology of Religion	3.00	3.00	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	3.00	3.00	Basic concepts and objectives in study of culture. Range of cultural phenomena and approaches to their study. Applicable to the BG Perspective (general education) social sciences and international perspective requirements.
SOC	3000	Topics in Sociology	1.00	3.00	Courses being considered for offering on regular basis. See class schedule for listing. May be repeated. Prerequisite: SOC 1010.
SOC	3010	Social Psychology	3.00	3.00	Fall, Spring, Summer. Social behavior; process of interaction and interpersonal influence. Prerequisite: SOC 1010. Applicable to the BG Perspective (general education) social sciences requirement.
SOC	3020	Introduction to Sociological Theory	3.00	3.00	Fall, Spring. Major theories and concepts of sociology. Prerequisite: SOC 1010.
SOC	3120	Population and Society	3.00	3.00	Fall, Spring. Population growth and distribution; bearing on current economic, political and social problems. Prerequisite: SOC 1010 or consent of instructor. Applicable to the BG Perspective (general education) social sciences requirement.

SOC	3130	Fertility and Family Planning	3.00	3.00	Spring. Sociological causes and consequences of human fertility patterns with emphasis on trends and differentials in the United States, including: fertility decision making, value and costs of children, contraception and abortion, unplanned parenthood, voluntary childlessness, illegitimacy, sex education and related public policies. Prerequisite: SOC 1010.
SOC	3160	Minority Groups	3.00	3.00	Fall, Spring, Summer. Analysis of ethnic and minority groups in American society; conditions that favor and hinder acceptance of such groups as integral elements in national population. Prerequisite: SOC 1010. Applicable to the BG Perspective (general education) cultural diversity in the United States requirement.
SOC	3170	Social Stratification and Poverty	3.00	3.00	Spring. Inequalities in distributions of wealth, power and prestige in societies. Types of systems of inequality; caste, estate, class. Consequences of inequalities for society as a whole and for segments of society; educational-occupational opportunities, racial-ethnic relations, social mobility, social change. Prerequisite: SOC 1010.
SOC	3190	Alcohol and Public Policy	3.00	3.00	Fall, Spring, and Summer. This course addresses the social aspects of alcohol abuse with respect to the incidence, causes, and social control of problematic drinking. Policy issues considered include those relating to harm reduction, prevention, treatment, and intervention strategies. Other topics include fact and fiction about alcohol, the treatment of alcoholism as a disease, binge drinking, and new methods used to treat alcoholism in other countries. Prerequisite: SOC 1010.
SOC	3400	Deviance and Social Control	3.00	3.00	Fall, Spring, Summer. History of attempts to define and explain deviant behavior. Social conditions and processes associated with careers of deviants; relationship of deviancy to problems of social control. Prerequisite: SOC 1010. Applicable to the BG Perspective (general education) social sciences requirement.
SOC	3410	Juvenile Delinquency	3.00	3.00	Fall, Spring, Summer. Analysis and processes of development, treatment, prevention and control of juvenile delinquency. Prerequisite: SOC 1010.

SOC	3610	The Family	3.00	3.00	Fall, Spring, Summer. Traditional and contemporary family types; current similarities and differences of family organization in various cultural environments. Prerequisite: SOC 1010. Applicable to the BG Perspective (general education) social sciences requirement.
SOC	3680	Introductory Methodology	3.00	3.00	Fall, Spring. Survey course on research methods in sociology: nature of science, theory construction, operationalization of a research problem, alternative research designs (including evaluation), instrumentation, data collection and data analysis. Prerequisite: SOC 1010 or consent of instructor.
SOC	3690	Introductory Statistics	3.00	3.00	Fall, Spring, Summer. Data presentation, measures of dispersion, correlation, regression, probability, probability distributions, sampling distributions, hypothesis testing and analysis of variance. Prerequisite: SOC 1010.
SOC	3710	Applied Survey Research	3.00	3.00	Practical experience in survey research in an applied context: policy issues, problem formulation, measurement, questionnaire-interview design, sampling procedures, data collection, electronic data processing, interpretation and report writing. Prerequisites: SOC 1010, SOC 3680 and SOC 3690 or consent of instructor.
SOC	4040	Sociology of Aging	3.00	3.00	An understanding of the effects of age and aging on human behavior, including social context older adults experience, social policies affecting older adults, economics of aging, family relations of older adults, retirement, and widowhood. Prerequisite: SOC 1010.
SOC	4140	Society and the Environment	3.00	3.00	Fall. Present issues and problems of human environment from a sociological perspective. Special emphasis on analysis of the present problems of resources, pollution, technology, population, consumerism and the use of energy.
SOC	4170	Sociology of Sport	3.00	3.00	Fall, Spring. Sociological concepts and theories to investigate sport as social institution and relationship to other social institutions; organizational theory and small group research applied to sport; social psychological aspects of sports. Prerequisite: SOC 1010.
SOC	4190	Population and Development	3.00	3.00	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	3.00	3.00	Fall or Spring. Methods of measurement for enumeration and registration data; construction of life tables; measures of fertility, nuptiality, migration, and mortality; examination of census variables. Prerequisites: SOC 1010, SOC 3680, and SOC 3690, or consent of instructor.
SOC	4270	Introduction to Applied Demography	3.00	3.00	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	3.00	3.00	Fall, Spring, Summer. Definition, measurement, and correlates of crime. Classical and contemporary theories of crime causation. Societal responses to crime, offenders, and victims. Prerequisite: SOC 1010.
SOC	4420	Corrections	3.00	3.00	Fall, Spring. Historical, philosophical, and sociological analysis of strategies and institutions designed to punish and change the behavior of criminal offenders. Prerequisite: SOC 4410.
SOC	4450	Soc Perspectives Interpersonal Violence	3.00	3.00	Spring. Survey of social scientific theory, research and policy on interpersonal violence. Contemporary issues on violence including homicide, sexual assault, intimate partner and family violence and youth and gang violence. Prerequisite: SOC 1010.
SOC	4600	Sociology of Gender	3.00	3.00	Theoretical and empirical literature on family and sex roles; socialization, changing nature of women's and men's roles, and prospects for future. Institutional sources of women's and men's roles in other cultures. Prerequisite: SOC 1010. Credit only allowed for one of SOC 4600 or WS 4600.
SOC	4610	Sociology of Family Violence	3.00	3.00	Fall, Spring. Current research and theoretical perspectives on family violence: spouse battering; marital rape; sibling violence; incest; child abuse. Sex roles, family ideologies, social structures, power relations examined as constituting the basis of family conflict and violence between family members. Prerequisite: SOC 1010.

SOC	4700	Readings, Research and Internship	1.00	8.00	Fall, Spring, Summer. Supervised independent work in selected areas. Extensive reading of more advanced literature, planned research or field placement in an approved setting. May be repeated, but cannot exceed a total of 12 hours. Prerequisites: junior standing and a minimum of 12 hours of accumulated credit in regularly scheduled SOC courses. Prior written permission of instructor and department chair required. Graded S/U.
SOC	4710	Applied Sociology Experience	1.00	6.00	Fall, Spring, Summer. Supervised field experience in an applied sociology setting. May be repeated up to nine credit hours maximum. Prerequisite: departmental permission.
SOC	4800	Senior Seminar	3.00	3.00	Spring. Capstone seminar in sociology for senior majors. Integrates knowledge from previous sociology courses. Students carry out research project under direction of faculty member of choice. Prerequisite: senior major status. May be repeated.
SOC	4890	Internship	1.00	5.00	Fall, Spring, Summer. Provides practical experience in applied sociology such as criminology, human services, population studies, community planning and survey research. May be repeated. Only five hours may be applied to SOC major or minor. Prerequisite: 12 hours in SOC. Graded S/U.
SOC	4950	Workshop on Current Topics	1.00	4.00	Intensive educational experience on selected topics. Typically, an all-day or similar concentrated time format. Requirements usually completed within time format. May be repeated if topics differ, on approval of adviser.

Subject: Social Science	Number	Long Course Title	Min Units	Max Units	Long Description
SOSC	1010	Introduction to the Social Sciences	3.00	3.00	Fundamental concepts and methods in the social sciences.
SOSC	2890	Human Services Practicum	3.00	4.00	Supervised field experience in an approved agency combined with a seminar designed to integrate theory and practice. Capstone course to the human services curriculum. Prerequisite: DHS 3300 or equivalent and consent of instructor.
Subject: Social Work	Number	Long Course Title	Min Units	Max Units	Long Description
SOWK	1100	Introduction to Social Work Profession	3.00	3.00	Fall, Spring. Origins of the profession and its relationship to social welfare. Generalist knowledge base of social work and professional values which guide social work practice.

SOWK	2280	Diversity, Oppression and Social Justice	3.00	3.00	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, pre-major or major standing.
SOWK	3000	Social Work Research Methods	3.00	3.00	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	3.00	3.00	Fall, Spring. The institutions of social welfare; basic concepts of social welfare as a response to unmet human need. Issues of diversity, growth of the profession and related values. Prerequisites: social work major, POLS 1100 and ECON 2000; or consent of instructor.
SOWK	3200	Human Behavior and the Social Environment I	3.00	3.00	Fall, Spring. Life span from conception to later adolescence utilizing an ecological perspective. Impact of biological, psychological and socio-cultural systems on human growth and development. Prerequisites: social work major, BIOL 1040, SOC 1010, and PSYC 1010.
SOWK	3210	Human Behavior and the Social Environment II	3.00	3.00	Fall, Spring. Continuation of the life span which includes early adulthood, middle adulthood, aging process, death and dying. Theories and research on various systems (family, groups, organizations) which influence human growth and development. Prerequisites: social work major and SOWK 3200.
SOWK	3220	Social Policy	3.00	3.00	Fall, Spring. Social problems, social policy and social services as interrelated areas. Basic models for evaluating and influencing social policy. Prerequisites: social work major and SOWK 3120.
SOWK	3250	Social Work Practice I	4.00	4.00	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, SOWK 3200, DHS 3300, SOWK 3230; or consent of instructor.

SOWK	3290	Social Work Practice II	3.00	3.00	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, SOWK 3200, DHS 3300, SOWK 3250. Can be taken concurrently with SOWK 4060.
SOWK	4000	Topics in Social Work	1.00	3.00	On demand. Courses being considered for offering on regular basis. May be repeated.
SOWK	4060	Practice III	3.00	3.00	Fall, Spring. Course builds on previous practice courses covering material from mezzo through macro practice. Content includes social work treatment and task group, organizational and community practice. Community practice skills include: advocacy, fundraising, education, lobbying. Prerequisites: Social Work major, SOWK 3200, DHS 3300 and SOWK 3230 or consent of instructor. Can be taken concurrently with SOWK 3250.
SOWK	4100	Mental Health	3.00	3.00	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	3.00	3.00	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	12.00	12.00	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	3.00	3.00	Fall, Spring, Summer. Faculty and field instructors conjointly teach this course. Conceptual frameworks, precise techniques and practitioner styles are considered as they underlie the student's problem solving in field instruction. Taken concurrently with SOWK 4230.
SOWK	4700	Independent Study	1.00	3.00	Fall, Spring, Summer. Student designs and carries out study or special project in area of interest. Prerequisites: junior standing, social work major and faculty sponsor. May be repeated up to six hours.

Subject: Spanish	Number	Long Course Title	Min Units	Max Units	Long Description
SPAN	1010	Elementary Spanish I	4.00	4.00	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	4.00	4.00	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 Spanish I	3.00	3.00	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	3.00	3.00	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	3.00	3.00	Fall, Spring. Development of reading comprehension in Spanish using cultural materials concerning Spain and Spanish America. Conducted in English. Prerequisite: SPAN 2010 or three years of Spanish in high school. Cannot be taken for credit if SPAN 2020 credit has been received. Applicable to the BG Perspective (general education) humanities and arts and international perspective requirements.
SPAN	2200	Language and Culture Through Community Living	2.00	2.00	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	1.00	1.00	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	1.00	1.00	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	3.00	3.00	Fall. Introductory overview of Latin American culture from a variety of disciplinary perspectives. Topics may include racial, national and regional identities; urban and rural society; popular celebrations and political protest. Conducted in English.
SPAN	3000	Preparation for Study in Spain	1.00	1.00	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	3.00	3.00	Development of skills in speaking and writing, with appropriate grammar review. Prerequisite: SPAN 2020.
SPAN	3520	Spanish Composition and Conversation II	3.00	3.00	Continued development of skill in speaking and writing, with appropriate grammar review. Prerequisite: SPAN 2020.

SPAN	3670	Introduction to Spanish Peninsular Literature	3.00	3.00	Outstanding authors, works and movements of Peninsular literature from the Middle Ages to the present. Prerequisite: SPAN 3510, SPAN 3520 or consent of instructor.
SPAN	3680	Introduction to Spanish American Literature	3.00	3.00	Outstanding authors, works and movements from the time of discovery to the present. Prerequisite: SPAN 3510, SPAN 3520 or consent of instructor.
SPAN	3710	Spanish Civilization	3.00	3.00	Political, social, intellectual, artistic development of Spain. Prerequisite: SPAN 3510 or SPAN 3520.
SPAN	3770	Civilization of Mexico and the Caribbean	3.00	3.00	Fall, Spring. Political, social, intellectual, artistic development of Mexico, Central America and Spanish-speaking islands of the Caribbean. Prerequisite: SPAN 3510 or SPAN 3520.
SPAN	3780	Civilization of South America	3.00	3.00	Fall, Spring. Political, social, intellectual, artistic development of Spanish-speaking countries of South America. Prerequisite: SPAN 3510, SPAN 3520 or consent of department.
SPAN	3790	Readings in Hispanic Studies	1.00	3.00	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	3.00	3.00	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	3.00	3.00	Fall, Spring, Summer. Topics chosen from either Peninsular, Latin American and/or U.S. Latinos literature, linguistics, language, film and/or culture. May be repeated up to nine credit hours with different topics. Prerequisites: SPAN 3510 and SPAN 3520.
SPAN	3950	Workshop in Spanish	1.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	Outstanding works of the 19th century; romanticism, realism, naturalism, prose and poetry. Prerequisite: SPAN 3670.
SPAN	4440	Contemporary Spanish Literature	3.00	3.00	Outstanding works from the generation of 1898 to the present; poetry and prose. Prerequisite: SPAN 3670.
SPAN	4500	Advanced Grammar and Composition	3.00	3.00	Grammar and composition, especially appropriate for future teachers of Spanish. Prerequisites: SPAN 3510 and SPAN 3520.
SPAN	4510	Advanced Conversation	1.00	1.00	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	3.00	3.00	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	3.00	3.00	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	1.00	3.00	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	3.00	3.00	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	3.00	3.00	Representative authors from Modernism and subsequent 20th-century literary developments; prose and poetry. Prerequisite: SPAN 3680 or consent of instructor.
SPAN	4880	Contemporary Mexican Literature	3.00	3.00	Outstanding works of the 20th century. Prerequisite: SPAN 3680 or consent of instructor.
SPAN	4890	Hispanic Studies	3.00	3.00	Intensive study of an author, literary school, genre, linguistic topic, or selected theme. May be repeated if topics clearly differ. Prerequisite: SPAN 3670 or SPAN 3680.

Subject: Applied Statistics	Number	Long Course Title	Min Units	Max Units	Long Description
STAT	2000	Using Statistics	3.00	3.00	Fall, Spring. Descriptive statistics, probability distributions, estimation, hypothesis testing, regression, contingency tables. Interpretation and misinterpretation of statistical techniques. Does not count toward BSBA degree.
STAT	2110	Elementary Statistical Methods I	3.00	3.00	Fall, Spring. Elementary probability, random variables, probability distributions, sampling, descriptive statistics, sampling distributions, estimation. Prerequisite: credit for MATH 1260 or MATH 1310, or C or better in MATH 1340. Credit not given for both STAT 2110 and MATH 2470.
STAT	2120	Elementary Statistical Methods II	3.00	3.00	Fall, Spring. 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	5.00	5.00	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	3.00	3.00	Fall. Linear, nonlinear and multiple regression and correlation analysis. Prerequisite: MATH 4410 or consent of instructor.

STAT	4060	Sample Design	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	Stochastic stationary and nonstationary models; use in forecasting seasonal and nonseasonal discrete time series; fitting models to time series data. Prerequisite: MATH 4410 or consent of instructor.
STAT	4910	Studies in Statistics	1.00	3.00	On demand. Investigation of selected areas or contemporary problems. May be offered individually and in classes depending on student needs and nature of material. May be repeated.

Subject: Telecommunication	Number	Long Course Title	Min Units	Max Units	Long Description
TCOM	1030	Media and the Information Society	3.00	3.00	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	1.00	1.00	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	3.00	3.00	Fall, Spring. Basic theories and tasks of audio and video production including scripting, technical quality and aesthetics. In-studio experience in radio and television operation. Laboratory hours. No prerequisites. Not open to TCOM majors. Extra fee.

TCOM	2600	Writing for Electronic Media	3.00	3.00	Fall, Spring, Summer on demand. Writing for broadcasting and other electronic media; creating scripts with visual and aural appeal; conveying messages in clear, economical, conversational yet professional style to effectively communicate to mass audiences. Prerequisites: GSW 1100/GSW 1110 and TCOM 1030/JOUR 1000. Extra fee.
TCOM	2620	Radio Announcing and Production	3.00	3.00	Fall, Spring. Style and basic principles and practices of announcing; theories and processes of audio production. Laboratory hours. Prerequisite: TCOM 2600. Extra fee.
TCOM	2630	Video I: Production Fundamentals	3.00	3.00	Fall, Spring. Principles of multiple-camera studio directing for television and film. Examination of conventional practices. Series of studio workshops with emphasis on directing, content development, planning and scripting, and composition. Laboratory hours. Prerequisite: TCOM 2600. Nonmajors by permission of instructor. Extra fee.
TCOM	2640	Interactive Online Media	3.00	3.00	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	3.00	3.00	On demand. Internet-based software applications that are affecting the telecommunication industry. Provides students with the fundamentals for functioning in an industry that is increasingly characterized by its reliance on Internet-based activities. Prerequisite: TCOM 2600 or consent of instructor.
TCOM	2700	Topics in Minorities and Film/Video	3.00	3.00	On demand. Through discussions, screenings, and research, the student will explore the portrayal and/or participation of minorities in film and video. Topic varies. No prerequisite. Applicable to the BG Perspective (general education) cultural diversity in the United States requirement. Extra fee.
TCOM	3500	Scriptwriting	3.00	3.00	Fall. Basic principles of scripting teleplays (television) and screenplays (film). Covers the essential elements, from developing an initial story idea and creating believable characters, to writing a complete script and pitching the idea to a knowledgeable audience. Prerequisite: TCOM 2600, nonmajors with permission of department.

TCOM	3550	Global Telecommunication Systems	3.00	3.00	Fall, Spring. Survey of telecommunication systems in the global context. Comparison of technical and cultural bases, economics, politics, programming, policy and regulation and audience research. Prerequisite for TCOM majors: TCOM 2600. Non-majors by permission of department.
TCOM	3600	Media Research	3.00	3.00	Fall, Spring, Summer. Overview of approaches to social research in media studies; survey methods, including sampling, measurement, interviewing, questionnaire design and presentation of results; content analysis; ratings, and interpretation of elementary descriptive statistics. Junior standing recommended.
TCOM	3640	Video II: Field Production and Editing Fundamentals	3.00	3.00	Fall. Field experience in content creation and production. Focus on single-camera, film-style video production. Includes equipment handling, artistic and aesthetic composition, tape and nonlinear editing, and production management. Laboratory hours. Prerequisite: TCOM 2630 or equivalent experience. Extra fee.
TCOM	3650	Broadcasting History	3.00	3.00	Fall. Current U.S. broadcasting with view of antecedents in regulations, economics, programs, audiences, stations, networks, technology and employment.
TCOM	3660	Media Effects	3.00	3.00	Fall, Spring, Summer. Theories and research studies of media effects. Critical examination of opposing viewpoints. Prerequisite: TCOM 2600.
TCOM	3680	Radio Workshop	3.00	3.00	Fall. Development of program ideas through all stages of planning, writing, directing and selling. Individual program projects for possible use on WBGU or WFAL. Prerequisite: TCOM 2620. Extra fee.
TCOM	3950	Workshop on Current Topics	1.00	3.00	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	3.00	3.00	On demand. Examines radio-TV-film documentaries, including history-criticism, research-writing. Lecture/discussions and viewings/labs comprise the meetings. Interdisciplinary participation is encouraged. May be repeated once for different topics. Prerequisite: GSW 1120 and instructor permission.

TCOM	4390	Topics in Sport Telecommunications	3.00	3.00	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 Ed.
TCOM	4520	Online Social Media	3.00	3.00	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. Junior standing recommended. Approved for Distance Ed.
TCOM	4530	Media Sales and Promotion	3.00	3.00	On demand. The course introduces the advertising and media product sales process for telecommunications media and various techniques to promote media companies and products. Prerequisites: TCOM 1030/JOUR 1000 or consent of instructor.
TCOM	4550	Telecommunications Management	3.00	3.00	Spring. Function, organizational structure and procedures involved in the operation of the telecommunication industry and electronic media. Prerequisite: TCOM 2600.
TCOM	4600	Telecommunication Policy and Regulation	3.00	3.00	Fall, Spring. Theoretical approaches to key policies and regulations shaping activities in the telecommunication sector. Applied study of policy and regulatory issues in broadcasting, cable, telephony, the Internet and digital media. Prerequisites: Junior standing required; TCOM 2600.
TCOM	4610	Audience Research	3.00	3.00	Fall. Theories of audience and how they are applied in audience research. Types of audience research and how they are used in different settings. Techniques in collecting and analyzing data for audience research and the role of audience research in advertising, programming, financial analysis and social policy decision making. Prerequisite: TCOM 2600.
TCOM	4620	Radio Programming and Audiences	3.00	3.00	Spring. Modern radio program formats and their audiences in the United States. Prerequisite: TCOM 2620.

TCOM	4630	Telecommunications Programming	3.00	3.00	Fall. Audience behavior, program genres and the structure and procedures of the telecommunication industry in the selection, scheduling and evaluation of television, cable programs and online portal web sites. Prerequisite: TCOM 2600.
TCOM	4640	Practicum in Interactive Online Media Production	3.00	3.00	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	3.00	3.00	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. Junior standing required. Extra fee.
TCOM	4670	Gender, Media & Culture	3.00	3.00	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	Video III: Advanced Directing and Producing	3.00	3.00	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	1.00	3.00	On demand. Investigation and analysis of area in telecommunication. Various topics of current concern. May be repeated with permission of adviser to six hours.

TCOM	4700	Practicum in Video Production	3.00	3.00	Fall. Application of technical, practical, media business and management knowledge to develop and produce television programs in collaboration with Channel 27 WBGU-TV (PBS) and Bowling Green State University. Areas covered: Production technology, equipment, pre-production, production and post-production, budgeting, screening, marketing and new technology in video production. Prerequisite: TCOM 3640.
TCOM	4750	Electronic Surveillance and Privacy	3.00	3.00	On demand. The course examines the social implications of a world where everyday life is increasingly subject to electronic surveillance. Theoretical and policy approaches to understanding the growth of electronic surveillance and its consequences. Indepth analysis of various modes of electronic surveillance. Evaluation of North American and European privacy policy frameworks.
TCOM	4860	Media Industry and Events	3.00	3.00	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	1.00	6.00	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	1.00	3.00	Fall, Spring, Summer. For advanced student who wishes to do intensive research in telecommunication and media studies, independently or in conjunction with courses regularly offered. May be repeated if topics differ. Prerequisite: consent of department.
Subject: Technology Education	Number	Long Course Title	Min Units	Max Units	Long Description
TE	2520	Elements of Instruction	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	2.00	2.00	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	1.00	3.00	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	1.00	16.00	Spring. Classroom teaching under supervision on full-day basis. Conferences and seminars supplement program. Required of students in secondary school or special certification program. Eligibility requirements must be met. C/F hrs.: 30 hrs/week. May be repeated. Graded S/U. Concurrent with TE 4490.

Subject: Technology	Number	Long Course Title	Min Units	Max Units	Long Description
TECH	1010	Technology I	3.00	3.00	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	1.00	3.00	For students wanting to study selected techniques, or applications. May be repeated if topics vary but no more than 3 hours may be applied to any associate degree program.
TECH	2230	Mechanical Power Transmission	3.00	3.00	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	1.00	3.00	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	1.00	3.00	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	4.00	4.00	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	1.00	3.00	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	1.00	3.00	Paid work activity in an appropriate technology environment related to an occupational objective. One credit requires 180 hours of work. May be repeated to three credits. Prerequisite: permission of site supervisor and adviser.
TECH	3020	Technology Systems in Societies	3.00	3.00	Current issues and their relationship to technology and systems in various cultures throughout the world; emphasis on explaining technological behaviors, and on showing how technology permeates all human affairs. Two one-and-one-half-hour lectures per week. Prerequisite: junior status or consent of instructor. Applicable to the BG Perspective (general education) social sciences and international perspective requirements.
TECH	3030	Instructional Design and Delivery	3.00	3.00	Learning styles, reading levels, philosophies of learning and education, instructional delivery methods, instructional techniques and evaluation instruments.
TECH	3100	Computer-mediated Communications in Training and Education	3.00	3.00	On demand. Introduces students to computer-mediated communications and applications within training and education today. Focus is on the application of networking technologies and resources that support high-quality, interactive instruction in both face-to-face and at-a-distance learning environments.
TECH	3200	Adult Learning in Technological Settings	3.00	3.00	Introduction to adult development theory and related implications for adult learning, design elements from assessment through evaluation and identification of roles and responsibilities of educators and learners in various environments.

TECH	3890	Cooperative Education	4.00	4.00	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	1.00	3.00	Intensive educational experience in a specialized technology. Typically an all-day or concentrated format. Requirements usually completed within time format. May be repeated.
TECH	4020	Innovation in Technology	3.00	3.00	Techniques and procedures involved in innovation and experimentation related to technology; emphasis on product and prototype innovation, experimentation, problem solving, research and development, diffusion and adoption of innovations. Prerequisite: junior status or consent of instructor.
TECH	4030	Evaluation and Assessment within Technology	3.00	3.00	Principles and procedures used in the measurement, evaluation, and assessment of educational programs involving individuals, groups, programs, and systems within a technology setting.
TECH	4150	Instructional Materials Development	3.00	3.00	Instruction in the organization, design, preparation, and application of technology-based teaching materials. Emphasis is on the underlying theories of instructional materials selection and development, instructional design, visual communication, and instructional materials production processes.
TECH	4210	Technological Forecasting	3.00	3.00	On demand. Examining different technologies and technology systems, as they pertain to the information technology (IT) industry and additional industries; determining how these technologies will be used, what kind of demand there may be for them, and some of the positive and negative consequences of implementing them. Prerequisites: TECH 3020 and TECH 3100, or by permission of instructor.
TECH	4220	Information Policy Analysis	3.00	3.00	On demand. Examining current and pending federal and state legislation that impacts how electronic information (audio, video, and text) is disseminated; exploring the political, cultural, economic, and social aspects of these policies as they pertain to information and technology. Prerequisites: TECH 3020 and TECH 3100, or by permission of instructor.

TECH	4230	Digital Rights Management Perspectives	3.00	3.00	On demand. Examining current and pending rights models used to secure digital content; examining the implications Digital Rights Management (DRM) schemes carry with them, and their impact on the flow of electronic information in modern societies. Prerequisites: TECH 3020 and TECH 3100, or by permission of instructor.
TECH	4240	Media Usability Studies	3.00	3.00	On demand. Examination of the usability of computer-based device interfaces and the accomplishment of human tasks, thinking critically about how information is presented; attention to hardware and software user interfaces, user-centered evaluation processes, usability engineering, educational uses of computers, and computer-supported cooperative work. Prerequisites: TECH 3020 and TECH 3100, or by permission of instructor.
TECH	4280	Development of Training Programs	3.00	3.00	Design, production and evaluation of training programs for industry and business. Job analysis, task analysis, instructional design and cost analysis in development of training programs.
TECH	4380	Supervisory Practices in Technological Settings	3.00	3.00	This course examines the supervisory practices and procedures administered in technological settings, with an emphasis on planning, organizing, and controlling employee activity in these unique work environments. TECH 4380 has been developed and approved for online delivery.
TECH	4480	Transformational Learning and Technology	3.00	3.00	Developing an understanding of technology systems as political, economic, and social entities that have multiple goals; using that understanding as a framework for the development of educational adoption events that promote transformational learning during introduction and application of new technologies. Prerequisites: TECH 3020 and TECH 3100.
TECH	4800	Topics in Technology	1.00	3.00	Current trends and developments in industry and business, particularly as they have significance to equipment, materials, processes, systems and facilities related to the education of technologists. May be repeated on approval of adviser.
TECH	4890	Cooperative Education	4.00	4.00	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	1.00	3.00	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	4.00	4.00	All terms. Departmental approved and supervised industrial or technical applied research, with a written technical report and presentation in seminar or other format. May be substituted as equivalent to TECH 3890 or TECH 4890 cooperative education experiences. May be repeated. Graded S/U.

Subject: Theatre & Film	Number	Long Course Title	Min Units	Max Units	Long Description
THFM	99	Major Event Participation	0.00	0.00	Fall. Required once of all Theatre and Film Majors of sophomore or junior standing and once of all Theatre and Film Majors in their senior year. Students will take part in a professional adjudicated audition/interview process scheduled at the end of the fall semester. Graded S/U.
THFM	1000	Production Participation: Acting I	1.00	1.00	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	1.00	1.00	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	1.00	1.00	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	3.00	3.00	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	2.00	2.00	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	2.00	2.00	Spring. Tools, equipment and techniques used in basic costume construction, including materials and fabrics, basic stitches, patterning, draping, dyeing and distressing. Emphasis is placed on practical application through the department's production program. Laboratory hours required.
THFM	1490	Basic Stage Lighting and Sound	2.00	2.00	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	2.00	2.00	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	3.00	3.00	Fall, Spring, Summer. Various approaches to looking at films and writing about them. Essential elements of film production, such as editing, sound and composition, camera work, and film genres explored through viewing and discussion of representative films. Introduction to aesthetic and structural languages of film as an art form. Applicable to the BG Perspective (general education) humanities and arts requirement. Extra fee.
THFM	1910	Script Analysis	3.00	3.00	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	3.00	3.00	Fall, Spring, Summer. Introduction to the solo performance of literature (poetry, prose, oral history). Emphasis on textual analysis as well as vocal and physical techniques of performance. Applicable to the BG Perspective (general education) humanities and arts requirement.

THFM	2150	Exploring Cultural Diversity Through Performance	3.00	3.00	Fall, Spring. Through performance and discussion of selected public and private texts written by American minority writers, this course explores what it means to be a part of a culturally diverse society. Applicable to the BG Perspective (general education) cultural diversity in the United States requirement.
THFM	2400	Performance for Entrepreneurs	3.00	3.00	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	3.00	3.00	Fall, Spring. Basic techniques of acting applied to creating contemporary characters in realistic situations; imaginative, emotional and sensory responsiveness.
THFM	2420	Acting: Topics in Voice and Movement	3.00	3.00	Fall or Spring. Developing the actor's voice and body as major tools of expressiveness, expanding physical and/or vocal flexibility and range. Topic varies. May be repeated to 12 hours if topics differ, on approval of adviser.
THFM	2550	Film I: Cinematography	3.00	3.00	Fall, Spring. Theory and techniques of cinematography. The technical and aesthetic aspects of light, shadow, color, film stock, lens choice, and lighting design. Projects in still photography and 16mm motion pictures. Laboratory hours arranged. Prerequisites: THFM 1610, THFM 1910, THFM 2620. Extra fee.
THFM	2560	Film II: Editing, Image, and Sound	3.00	3.00	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	3.00	3.00	Fall, Spring. History of film making, representative artists, genres, and innovation in commercial as well as experimental film.

THFM	2750	Arts Management I	3.00	3.00	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	1.00	3.00	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	1.00	1.00	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	1.00	1.00	Fall, Spring. Studio course for advanced students participating as a technician in departmental productions. May be repeated to 4 hours.
THFM	3020	Performance Studies II	3.00	3.00	Spring. Exploration of various forms of solo performance, such as performance in social context, the one-person show, or specialized literary or genre study. (Shakespeare, modern poetry, southern fiction). Topics to be announced. May be repeated for six hours. Prerequisite: THFM 2020 or consent of instructor.
THFM	3300	Theatrical Makeup	3.00	3.00	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	1.00	1.00	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	3.00	3.00	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	3.00	3.00	Fall, Spring. Theory and techniques of play direction. Each student directs a short scene. Laboratory hours arranged. Prerequisites: THFM 1910, and THFM 2410 or THFM 1500, or consent of instructor.
THFM	3420	Advanced Directing	3.00	3.00	Spring. THFM 3410 continued. Each student directs at least one short play or series of short scenes. Prerequisite: THFM 3410. Laboratory hours arranged.
THFM	3440	Acting: Character and Range	3.00	3.00	Alternate years. In depth study of character development for a variety of performance contexts and for broadening range of roles and performative choices. Prerequisites: THFM 1910, THFM 2410, and THFM 2420, or consent of instructor.
THFM	3450	Acting: Topics and Applications	3.00	3.00	Alternate years. Intensive lectures/studio examining a specific topic, style or range of acting styles. May be repeated to six hours if topics differ, on approval of adviser. Prerequisites: THFM 1910, THFM 2410, and THFM 2420, or consent of instructor.
THFM	3470	Theatre History and Literature: Origins-1700	3.00	3.00	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	3.00	3.00	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	3.00	3.00	Spring. Read, research and discuss/report on the aesthetics, dramatic intent, historical significance and production history of milestone black plays.
THFM	3520	Musical Theatre	3.00	3.00	On demand. History, theory and staging techniques of musical theatre production in the United States.
THFM	3550	Film III: Sync Sound Production	3.00	3.00	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	3.00	3.00	Spring. Rehearsal/Workshop development period prior to tour to NW Ohio public schools. Students will be in rehearsal two days a week, Tuesday and Thursday. Enrollment limited to students cast in the Tree House Troupe productions. Auditions are held each year during the fall term. See department for audition dates. Concurrent enrollment in THFM 3610 required.
THFM	3610	Tree House Troupe--Tour	3.00	3.00	Spring. Tour of two productions and workshops to NW Ohio public schools. Students will be off campus two days a week, Tuesday and Thursday. Enrollment limited to students cast in the Tree House Troupe productions. Auditions are held each year during the fall term. See department for audition dates. Concurrent enrollment in THFM 3600 required.
THFM	3650	Culture and the Moving Image	3.00	3.00	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	3.00	3.00	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	3930	Film: From Concept to Distribution	3.00	3.00	Fall. Overview of mainstream and independent film business. Financing, producing, marketing, and distributing films. Current trends, developments in technology, responsibilities of production personnel. Prerequisites: THFM 1610, THFM 2620. Extra fee.
THFM	3950	Workshop on Current Topics	1.00	3.00	Intensive educational experience on selected topics. Typically, an all-day or similar concentrated time format. Requirements usually completed within time format. May be repeated if topics differ, on approval of adviser.
THFM	4400	Theatre for Young Audiences	3.00	3.00	Fall. Producing plays for child audiences; application of concepts of child development to aesthetic problems of theatre for young audiences, through reading, discussion and participation.

THFM	4420	Screenwriting	3.00	3.00	On demand. Story structure in mainstream features and short form narratives. Screenplay form, dramatic rhythm, scene structure. Theory and techniques of creating action, character, metaphor, dialogue for film. Development of cinematic story telling skills through creative writing exercises to staged readings of students' screenplays.
THFM	4430	Playwriting	3.00	3.00	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	3.00	3.00	On demand. Theory and techniques of creating performances for film. Points of contact between stage and screen as well as specific adjustments and requirements for working in film. Emphasis on script analysis, rehearsal methods, collaboration between actors and directors. Readings, screenings, taped exercises, collaborative projects. Prerequisites: THFM 2410, THFM 2550, or THFM 2620.
THFM	4450	Acting: Songs and Arias	3.00	3.00	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	1.00	6.00	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	1.00	6.00	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	3.00	3.00	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	1.00	6.00	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	3.00	3.00	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	3.00	3.00	Fall. Historical overview of decorative arts in their social context for application in productions.
THFM	4610	Puppets and Masks: Design and Craft	3.00	3.00	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	3.00	3.00	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	3.00	3.00	Fall. Theories and techniques of lighting stage productions; lighting instruments and equipment. Prerequisite: THFM 1490 or permission of instructor.
THFM	4650	Stage Management	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	3.00	3.00	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	2.00	2.00	Fall, Spring, Summer. A closely supervised significant production assignment for a major production, such as directing, acting in a major role, or a design or stage management assignment. Heavy production participation commitment. Prerequisite: Advanced acting, directing, stage management, scenic, costume or lighting design as applicable to the project; and permission of the department. (See department for petition to enroll.)
THFM	4850	Topics in Film, Theatre, and Performance Studies	3.00	3.00	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	1.00	12.00	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	1.00	12.00	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	1.00	3.00	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	4980	Senior Seminar in Theatre and Film	2.00	2.00	Fall. Exploration of the learning/life skills inherent in the study and practice of theatre and film. Major Event participation required. Prerequisite: senior standing and THFM 99.

Subject: Tourism, Leisure & Event Planning	Number	Long Course Title	Min Units	Max Units	Long Description
TLEP	1900	Recreation Leadership	3.00	3.00	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	3.00	3.00	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	3.00	3.00	Fall and Spring. Overview of the travel industry; employment opportunities, professional preparation; trends in travel; tourism data; issues in travel and tourism. Prerequisite or Corequisite: RTD 1900 or RTD 2100 or consent of instructor.
TLEP	2600	Leisure Services for the Older Adult	3.00	3.00	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	3.00	3.00	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	3.00	3.00	Fall, Spring, Summer. Overview of the travel industry; employment opportunities, professional preparation; trends in travel; tourism data; issues in travel and tourism. Prerequisite: Recreation or Tourism major, RTD 1900 and RTD 2100 or RTD 2150, or consent of instructor.
TLEP	3250	Convention, Meeting, and Resort Administration	3.00	3.00	Exploration of analytical framework for management strategies unique to travel and tourism industry. Analysis of structure and function for integration of services. Prerequisites: Tourism or Recreation major, RTD 2150 or consent of instructor.

TLEP	3800	Concepts and Techniques in Outdoor Education	4.00	4.00	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	3.00	3.00	Fall, Spring. 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: RTD 1900, RTD 2100 and 30 hours.
TLEP	3850	Recreation Program Development	3.00	3.00	Fall, Spring. Principles of program planning, organization and administration; operation of areas and facilities; current practices in publicity and public relations; supervision of program and staff; tournament scheduling; program budgeting. Prerequisites: RTD 1900, RTD 2100 and 30 hours.
TLEP	3860	Internship Preparation	1.00	1.00	Fall, Spring. Comparative analysis of leisure services and their roles in society with focus on personal and professional development. Prerequisites: recreation major and 60 semester credit hours.
TLEP	3870	Practicum: Leadership and Programming	1.00	5.00	Fall, Spring, Summer. Application of leadership and program theory to field setting. May be repeated to a maximum of six hours. Prerequisites: 1) Recreation major, RTD 1900, RTD 2100, RTD 3850, 2.5 GPA and approval of advisor or 2) Tourism major, RTD 1900 or RTD 2100, RTD 2150, RTD 3150, 2.5 GPA, and approval of advisor. Extra fee.
TLEP	3950	Workshop in Current Topics	1.00	3.00	On demand. Intensive educational experience on selected topics related to recreation and tourism.
TLEP	4150	Evaluation and Assessment of Planning Strategies for Destination Travel and Tourism	3.00	3.00	Conceptual framework for planning strategies unique to travel and tourism industry. Analysis of methods and techniques with emphasis on tracking and conversion studies. Prerequisites: 1) Recreation or Tourism major; 2) RTD 3250, 3) RTD 3870, 4) MKT 3000 and 5) 2.5 GPA; or consent of instructor.
TLEP	4700	Independent Study	1.00	3.00	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	3.00	3.00	Fall, Spring. Methods, techniques and application of evaluation processes. Prerequisites: RTD 3840, RTD 3850, recreation major or minor, or consent of instructor.
TLEP	4830	Recreation Areas and Facilities	3.00	3.00	Fall, Spring. Planning and design principles; acquisition, development, construction and maintenance of specific types of recreation areas and facilities. Prerequisites: 1) Recreation major or minor, 2.5 GPA, RTD 3870, RTD 3840 and RTD 3850; or 2) Tourism major, 2.5 GPA, RTD 3870, RTD 3150 and RTD 3250; or 3) consent of instructor.
TLEP	4840	Contemporary Issues in Tourism	3.00	3.00	Fall, Summer. Seminar in current issues of tourism. Prerequisites: 1) Recreation major or Tourism major, 2) 2.5 GPA, 3) RTD 3150, 4) RTD 3250, and 5) RTD 3870; or consent of instructor.
TLEP	4870	Practicum: Supervision and Administration	1.00	5.00	Fall, Spring, Summer. Application of program, supervision and administration theory to field setting; may be repeated to maximum of six hours. Prerequisites: 1) Recreation or Tourism major, 2) 2.5 GPA, 3) RTD 3870, and 4) approval of advisor; or consent of instructor. Extra fee.
TLEP	4880	Internship	15.00	15.00	Fall, Spring, Summer. A concentrated professional experience for students preparing for a career in recreation. Prerequisites: 1) Recreation major, 2.5 GPA, RTD 3840, RTD 3850, RTD 3860, RTD 3870, and approval of advisor; or 2) Tourism major, 2.5 GPA, RTD 3250, RTD 3870, RTD 4870, RTD 4150 or RTD 4830, and approval of advisor. Extra fee.

Subject: University Studies	Number	Long Course Title	Min Units	Max Units	Long Description
UNIV	1000	University Success	2.00	2.00	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	1.00	1.00	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	2.00	2.00	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	1.00	1.00	Fall, Spring. A dynamic self-development course that engages first-year students in the learning process and builds self-assurance by enabling them to assess their proficiency and plan strategically for growth in Investigation, Connection, Presentation, Writing, Participation, and Leadership.
UNIV	1200	Learning-Behavior Assessments	1.00	1.00	Fall, Spring. The Coursework Learning-Behavior Scale will be used by students to measure and modify their overall learning-behavior. This is an academic counseling course for students who participate in the Office of Multicultural Affairs programs. Repeatable up to 4 credits. Prerequisite: permission from Multicultural Affairs. Graded ABC/No Credit.
UNIV	1290	Career Planning	1.00	1.00	Strategies developed for career and life planning decisions. Occupational choice theory, assessment of values, needs, interests, and skills helpful in selecting an academic major and relating that major to a career. Investigation of occupations and issues affecting career choice.
UNIV	1300	Job Search	1.00	1.00	Strategies developed for job search and preparation. Skills in preparing resumes, job applications, cover and thank you letters, networking, and interviewing.
UNIV	1310	Career and Life Planning	2.00	2.00	Fall, Spring, Summer. Helps students examine their skills, interests, values and personal characteristics; investigate occupations and career paths; examine the interrelationship between self-knowledge and occupational decisions; identify academic programs and experiential learning opportunities that enhance future employment options; make informed career and life decisions; and establish realistic goals and an action plan. Extra fee.
UNIV	1410	EAP Strategies for Effective Work Performance	2.00	2.00	Fall, Spring. The course assists students with securing an internship. Course content includes the theory, practical knowledge, and skills required to perform effectively in the workplace including essential professional competencies. Prerequisites: Open to first, second, and third-year students only.

UNIV	2010	Orientation Training	2.00	2.00	Fall, Spring. Introduction to issues, challenges, student development theories, support services associated with the freshman year of college. Development of oral and written communication skills, teaching techniques, presentation skills, and an understanding of higher education and Bowling Green State University.
UNIV	2020	Practicum in Orientation	2.00	2.00	Fall, Spring. Participants co-facilitate an orientation course for freshmen, plan and present class sessions, promote awareness of campus resources, meet weekly with their co-facilitators, serve as peer adviser, evaluate the program and their experience, and attend training events. May be repeated.
UNIV	2100	Residence Life for the Paraprofessionals	1.00	1.00	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	1.00	1.00	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	1.00	1.00	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	1.00	1.00	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	3.00	3.00	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	1.00	15.00	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	1.00	1.00	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	1.00	1.00	Fall, Spring. Mentoring skills are developed by coaching a first-year student through experiential learning activities designed to improve skills in the University's Learning Outcomes: Investigation, Connection, Writing, Presenting, Participation, and Leadership. May be repeated. Prerequisite: Sophomore standing or above, 2.5 GPA or permission of instructor.

Subject: Visual Communications Technology					
	Number	Long Course Title	Min Units	Max Units	Long Description
VCT	1030	Introduction to Visual Communication Technology	3.00	3.00	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	3.00	3.00	Overview of the visual problem solving process and how it applies to the diverse formats used in visual communication technology. Focus is on problem solving that stimulates visual thinking. Includes visual problem solving analysis, freehand sketching and the application of design, using computer based vector and raster solutions. The use of orthographic projections, isometrics and multi-point perspective will be reviewed. Four and one-half hours of lecture/laboratory. Extra fee.

VCT	2040	Concepts of Visual Communication	3.00	3.00	Fall, Spring. Advanced visual communication concepts including problem solving, research, ideation, design, script writing, storyboarding, training techniques, proposal preparation, cost estimating and analysis. Overall project management techniques and environmental factors covered in depth. Four hours lecture and laboratory. Prerequisite: VCT 1030 or instructor approval. Extra fee.
VCT	2080	Introduction to Print Media	3.00	3.00	Fall, Spring, Summer on demand. Major printing processes; concentrations in image design, digital image assembly, image carrier preparation and image transfer. All new print media will be explored. Four hours of lecture/laboratory. Suggested prior enrollment in VCT 1030 is recommended. Prerequisite: VCT 1040. Extra fee.
VCT	2660	Introduction to Interactive Media	3.00	3.00	Introduction to basic interactive media concepts and techniques. Emphasis on basic design and production of effective media projects with a focus on network deployment. Prerequisites: VCT 1030.
VCT	2680	Video Fundamentals	3.00	3.00	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	3.00	3.00	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	3.00	3.00	Fall. Display and exhibit industry from problem analysis through design and production to installation and evaluation. Overview of "high-tech" media used to stop audiences and create the desired outcome. Four hours lecture and laboratory. Prerequisites: VCT 1030. Extra fee.

VCT	3080	Fundamentals of Imaging Technology	3.00	3.00	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	3.00	3.00	Fall. Study of imposition and image assembly and preparation for printing. Experiences in color proofing, plate preparation and process color printing are also provided. Four hours lecture/laboratory. Prerequisite: VCT 3080 or instructor approval. Extra fee.
VCT	3100	Advanced Print Media	3.00	3.00	Fall, Spring. Offset, screen, inkjet, flexographic, large format inkjet, digital and gravure image transfer examined. Integration of digital image preparation and the impact on transfer systems. Topics include quality control, problem solving, system management, production, industry trends and environment. Four hours of lecture/laboratory. Prerequisite: VCT 3090 or instructor approval. Extra fee.
VCT	3660	Applied Interactive Media Production	3.00	3.00	Exploration and experimentation with a variety of interactive media presentation technologies. Following the design process, students will produce complex interactive media projects with an emphasis on distribution methods. Prerequisites: VCT 2660 or instructor approval. Extra fee.
VCT	3690	Intermediate Video Production	3.00	3.00	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	3.00	3.00	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	3.00	3.00	Fall even years. Overview of the audio-animatronic industry including design, fabrication, programming, installation, maintenance and evaluation; various applications. Four hours of lecture/laboratory. Extra fee.

VCT	4560	Digital Color Applications	3.00	3.00	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	3.00	3.00	Research and experimentation in computer-generated digital imaging techniques. Four hours of lecture/laboratory. Prerequisite: VCT 3820. Extra fee.
VCT	4650	Commercial Photography	3.00	3.00	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	3.00	3.00	Fall, Spring. Techniques of visual communication problem solving: project coordination, scheduling, cost and estimating for visual presentations; aesthetic and technical qualities of graphic presentation. Four hours of lecture/laboratory. Prerequisites: VCT 2080 and senior standing. Extra fee.
VCT	4690	Advanced Video Production	3.00	3.00	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	1.00	3.00	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	3.00	3.00	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	1.00	3.00	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.
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Subject: Women's Studies	Number	Long Course Title	Min Units	Max Units	Long Description
WS	2000	Introduction to Women's Studies: Perspectives on Gender, Class and Ethnicity	3.00	3.00	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	3.00	3.00	Fall, Spring. Topics of interest in studying women in subject area not offered in regular college course offerings. May be repeated twice, if topics differ. No prerequisite.
WS	2730	History of Feminist Thought and Action	3.00	3.00	Spring. Historical survey of feminist theorists who have challenged and advocated changes in traditional ways of thinking about women's diverse social, sexual, racial, theological, class-specific status in society. Prerequisite: WS 2000 or permission of instructor.
WS	3000	Topics in Women's Studies	1.00	4.00	Fall, Spring. Topics of interest in studying women in subject area not offered in regular college course offerings. May be repeated twice if topics differ. No prerequisite.
WS	3010	Women, Art and Culture	3.00	3.00	Fall. Women's creativity and cultural production in the visual, literary and performing arts, and their relationships to broader cultural issues, including cross-cultural perspectives. Prerequisite: WS 2000 or consent of instructor.
WS	3050	Women of Color in the United States	3.00	3.00	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	3.00	3.00	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	Contemporary Global Feminisms	3.00	3.00	Fall. Exploration of contemporary transnational and third wave feminist theory and activism. There will be an emphasis on contemporary feminist philosophies around the world, particularly in non-Western cultures, and third wave and transnational feminist issues. Prerequisite: WS 2730.
WS	3270	Women in Modern Europe	3.00	3.00	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	3.00	3.00	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	3.00	3.00	An interdisciplinary exploration of the lives and experiences of women in Africa. Topics covered will include an historical overview; intersections among gender, politics, economics, nation, and religion; and representations of African women. Credit allowed only for one of WS 3440 or ETHN 3440.
WS	3710	Gender & Practice in Community-Based Work	3.00	3.00	Fall. A service learning course which prepares students for career and internship experiences in community-based work and the non-profit sector. Topics include: theories of management and feminist leadership including, work in feminist organizations, non-profit management, resource development and grant writing, advocacy and activism, outreach and public relations, group dynamics and teamwork.
WS	4000	Advanced Topics in Women's Studies	3.00	3.00	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	3.00	4.00	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: WS 3710 and senior standing or permission of the WS advisor.
WS	4330	Theories of Othered Bodies	3.00	3.00	Spring. Exploration of bodies that are culturally constructed as Other; the ways bodies are constructed, disciplined, and regulated by culture; and how individuals and groups resist cultural definitions of "appropriate" bodies.
WS	4450	Women's Sexualities	3.00	3.00	Spring. An interdisciplinary examination of women's sexuality, including eroticism, desire, body image, and the influence of personal identities and cultural politics on women's sexual behaviors, attitudes, and experiences.
WS	4550	Latina/o Gender and Sexuality	3.00	3.00	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	3.00	3.00	Theoretical and empirical literature on family and sex roles; socialization, changing nature of women's and men's roles, and prospects for future. Institutional sources of women's and men's roles in other cultures. Credit allowed only for one of SOC 4600 or WS 4600.
WS	4670	Gender, Media & Culture	3.00	3.00	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	3.00	3.00	Spring. Interdisciplinary exploration of the complex cultural, ethical, and political issues surrounding human reproduction in the U.S. and globally, emphasizing the intersectionality of gender, sexuality, race, and socioeconomic status.

WS	4700	Independent Study in Women's Study	1.00	3.00	Fall, Spring. Study project to be designed by student and member(s) of women's studies faculty in subject area not offered in regular course offering. Prerequisite: junior or senior standing or permission of instructor. May be repeated.
WS	4990	Senior Thesis in Women's Studies	3.00	3.00	Capstone course for Women's Study majors. An original research project on a topic of interest in Women's Studies. The final project will result in a written manuscript and oral presentation. Prerequisite: a research methods course (approved by WS advisor) and consent of the instructor. Senior standing required.