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## Kent State University

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**Course Numbering System**

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## COURSE NUMBERING SYSTEM

The numbering system for courses of study at this institution is as follows:

10000s Freshman level  
20000s Sophomore level  
30000s Junior level  
40000s Senior level  
50000s and above generally open only to graduate students

Undergraduate courses (10000-49999) are generally open to students of a class rank equivalent to the levels indicated. Students participating in the Honors, Early Admissions and Advanced Placement programs, as well as those who otherwise present evidence of qualifications beyond their class rank, may enroll in the appropriate undergraduate courses with the approval of their advisors and the instructors or departments offering the courses.

Most courses are offered in a regular sequence to meet students' programmatic needs; however, the availability of any specific course in a given semester is subject to sufficient student demand and available resources. Some courses require that a fee be paid in addition to instructional and general fees. These special fees, listed with the *Catalog* copy for each appropriate course, are subject to change at any time, upon approval by the Board of Trustees.

Undergraduate students may enroll in graduate courses only with prior written approval of their academic deans and the dean of the appropriate graduate school.

Courses marked with two asterisks (\*\*) are offered only at the Regional Campuses. Course abbreviations marked with two asterisks (\*\*) indicates **all** course offerings are at the Regional Campuses.

\*Course ineligible to be repeated for GPA recalculation.  
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## Course Abbreviations

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\*\*Courses offered only at Regional Campuses.

**NOTE:**

*Students who do not meet the course prerequisites may appeal to the department for approval to register.*

**ACCOUNTING (ACCT)**

**23020 Introduction to Financial Accounting (3)**  
Introduction to principles of accounting as they relate to financial accounting and the preparation of financial statements. Prerequisite: 28 or more credit hours.

**23021 Introduction to Managerial Accounting (3)**  
Introduction to principles of accounting as they relate to managerial accounting, including cost relationships. Prerequisite: ACCT 23020.

**33000 Fundamental Tax Procedures (3)**  
Nontechnical presentation of federal income tax laws and regulations as they relate to individuals. Prerequisite: minimum 2.50 cumulative GPA; and ACCT 23020 or ACTT 11000; and ACTT 23021 or ACTT 11001; not open to accounting (ACCT) majors.

**33001 Corporate Accounting I (3)**  
The review of the accounting cycle; financial statement preparation; accounting for sales, receivables, inventory, current liabilities and fixed assets. Written communication and professional accounting research skills are emphasized. Prerequisite: accounting (ACCT) major and minimum 2.50 cumulative GPA; and ACCT 23021 or ACTT 11001.

**33004 Introduction to Accounting Systems (3)**  
Provides an overview of accounting information systems with emphasis on systems design and internal controls. Interpersonal skills and computer applications are emphasized. Prerequisites: accounting (ACCT) major and minimum 2.50 cumulative GPA; and ACCT 23021 or ACTT 11001.

**33010 Cost Accounting (3)**  
Cost accounting for manufacturing and service organizations including cost determination, cost analysis, and reporting costs for decision-making, planning and control. Ethical decision-making and computer applications are emphasized. Prerequisites: accounting (ACCT) major and minimum 2.50 cumulative GPA and ACCT 33001 and 33004.

**33012 Corporate Accounting II (3)**  
Accounting for long-term liabilities, debt and equity investments, leases, pensions, and other post-retirement benefits, income tax allocation, and owners' equity; statement of cash flows. Verbal communication and professional accounting research skills are emphasized. Prerequisites: accounting (ACCT) major and minimum 2.50 cumulative GPA and ACCT 33001 and 33004.

**33061 Financial Reporting Issues and Analysis (3)**  
Issues relative to the balance sheet, income statement and cash flow statement. Topics include assets, liabilities, owner's equity, revenue recognition, EPS, deferred taxes and pensions. Cannot be counted toward accounting major. Prerequisite: minimum 2.50 cumulative GPA; and ACCT 23032 or ACTT 11001; not open to accounting (ACCT) majors.

**33063 Cost Control and Analysis for Management (3)**  
Cost accounting concepts and procedures; analysis of revenue, cost and income variances. Open only to nonaccounting majors; cannot count toward accounting major. Prerequisite: minimum 2.50 cumulative GPA; and ACCT 23021 or ACTT 11001; not open to accounting (ACCT) majors.

**43010 Principles of Auditing and Control (3)**  
Integration of concepts and practical aspects of auditing. The importance of strong controls is stressed. Ethical decision-making and written communication skills are emphasized. Prerequisites: minimum 2.50 cumulative GPA and senior standing and accounting (ACCT) major and ACCT 33010 and 33012. This course may be used to satisfy the writing-intensive requirement with approval of major department.

**43013 Advanced Management Accounting (3)**  
Advanced techniques and issues in costing and accounting measurement for management planning, decision-making and control. Professional accounting research, verbal communication and ethical decision-making skills are emphasized. Prerequisite: minimum 2.50 cumulative GPA and senior standing and accounting (ACCT) major and ACCT 33010 and 33012.

**43014 Advanced Accounting Systems (3)**  
Emphasizes the analysis, design and implementation of accounting information systems and internal controls. Written communication, ethical decision-making and computer application skills are emphasized. Prerequisite: minimum 2.50 cumulative GPA and senior standing and accounting (ACCT) major and ACCT 33001 and 33004 and 33010 and 33012.

**43020 Corporate Accounting III (3)**  
Business combinations, consolidated financial statements, specialized disclosures; foreign currency impacts; intercorporate investments. Professional accounting research and interpersonal skills are emphasized. Prerequisites: minimum 2.50 cumulative GPA and senior standing and accounting (ACCT) major and ACCT 33001 and 33004 and 33010 and 33012.

**43031 Income Taxation (3)**  
Basic concepts of income recognition and deductions for individuals and corporations. Detailed coverage of the taxation of C corporations. Written communication skills are emphasized. Prerequisite: minimum 2.50 cumulative GPA and senior standing and accounting (ACCT) major and ACCT 33001 and 33004 and 33010 and 33012.

**43033 Income Tax II (3)**  
Advanced partnership and corporate tax problems; estate and gift taxation; tax administration and practice. Professional accounting research and written communication skills are emphasized. Prerequisite: minimum 2.50 cumulative GPA and senior standing and accounting (ACCT) major and ACCT 33001 and 33004 and 33010 and 33012.

**43034 Nonprofit Accounting and Auditing (3)**  
Unique nonprofit, financial reporting, managerial accounting and financial and operating audits for government and nonprofit entities. Professional accounting research, written communication and ethical decision-making skills are emphasized. Prerequisite: minimum 2.50 cumulative GPA and senior standing and accounting (ACCT) major and ACCT 33001 and 33004 and 33010 and 33012.

**43092 Accounting Internship (3)**  
Study of activities related to concurrent on-the-job experience with cooperating industrial and public accounting firms. Professional accounting research and written communication skills are emphasized. S/U grading. Prerequisites: junior standing and accounting (ACCT) major and special approval.

**43093 Variable Title Workshop in Accounting (1-3)**  
(Course is repeatable) To be determined when a specific course is proposed for a particular term. S/U grading. Prerequisite: senior standing and accounting (ACCT) major and special approval.

**43095 Special Topics: Accounting (1-3)**  
(Course is repeatable) Special topics course that will be offered periodically with different topics and different faculty involved each time the course is offered. Prerequisites: senior standing and accounting (ACCT) major and special approval.

**43096 Individual Investigation in Accounting (1-3)**  
Open only to senior majors in accounting with special approval of advisor. Prerequisites: senior standing and accounting (ACCT) major and special approval

**ACCOUNTING TECHNOLOGY (ACTT)\*\*****11000 Accounting I—Financial (4)**

Introduction to financial accounting, including principles generally accepted in preparation of accounting statements for users outside of the business organization. Prerequisite: none.

**11001 Accounting II—Managerial (4)**

Introduction to managerial accounting, including accounting for manufacturing firms, budgeting, standard cost systems, direct costing, segment reporting and cost-volume-profit analysis. Prerequisite: ACTT 11000.

**11003 Payroll Accounting (2)**

Introduction to the payroll function, including preparation of payroll and related federal, state and local tax forms required of all businesses. Both manual and computerized applications will be studied. Prerequisite: ACTT 11000.

**20012 Accounting Software Applications (3)**

A lecture/computer lab course using accounting, spreadsheet and word processing software. Prerequisites: ACTT 11001 and COMT 11000 or special approval of full-time ACTT faculty.

**21000 Accounting III—Financial (3)**

An intensive and practical study of financial accounting principles pertaining to balance sheet and income statement accounts, and statement analyses. Prerequisite: ACTT 11001.

**21001 Accounting IV—Financial (3)**

Continuation of ACTT 21000. Also considers income statement accounts and financial statement analyses. Both manual and computerized applications will be studied. Prerequisite: ACTT 21000.

**21003 Fundamentals of Tax Preparation (3)**

A nontechnical presentation of federal income tax laws and regulations as they relate to individuals. Prerequisite: ACTT 11000.

**21006 Introduction to Corporate Tax Preparation (3)**

An introduction to the preparation of corporation tax reports. Prerequisite: ACTT 21003.

**21063 Introduction to Cost Accounting (3)**

Cost accounting concepts and systems; role of costs in decision-making; budgeting concepts and procedures; analysis of revenue, cost and income variances. Prerequisite: ACTT 11001.

**21092 Internship in Accounting Technology (2-3)\***

Students participate in a supervised field experience. Each credit hour requires a minimum of 7 hours of work per week for 15 weeks if the position is unpaid and 10 hours of work per week for 15 weeks if the position is paid. S/U grading. Prerequisites: ACTT 21000 and special approval.

**21095 Special Topics (1-3)\***

(Repeated registration permissible) Special topics in accounting. Prerequisite: special approval.

**21096 Individual Investigation—Accounting Technology (1-3)\***

(Repeated registration permissible) Independent in-depth research of an accounting topic supervised and coordinated by an accounting technology faculty member. Prerequisites: 12 credit hours of ACTT courses and special approval.

**ADOLESCENT/ADULT EDUCATION (ADED)****32142 Principles of Teaching Adolescents (3)**

Orientation to adolescence and the teaching-learning process. This course includes 30 field/clinical hours in an urban setting. IP grade permissible. Prerequisites: ITEC 19525 and EDPF 29525. This course may be used to satisfy the writing-intensive requirement with approval of major department.

**32268 The Secondary School Mathematics Curriculum (3)**

The secondary school mathematics curriculum will be examined. Students, textbooks and recommendations will be investigated. This course includes 30 field/clinical hours. Prerequisites: ADED 32142 and MATH 22005.

**32275 Social Studies Education and the Social Sciences (3)**

First of two special methods courses on teaching social studies at the secondary level. Focuses on achieving the purpose of social studies through attention to instruction, planning, curriculum and assessment. Prerequisite: ADED 32142 and admission to advanced study.

**32277 Teaching Science in Secondary Schools (3)**

Goals, methodology and resources for effective teaching of science to adolescents and young adults. Prerequisites: ADED 32142. Special fee: \$15 flat fee—subject to change.

**42196 Individual Project in Adolescent Education (2-4)**

S/U grading; IP grade permissible. Prerequisite: special approval.

**42268 Teaching of Mathematics in Secondary Schools (3)**

Methodology and materials for effective teaching of secondary school mathematics will be discussed and implemented in field experiences. Course includes 46 field/clinical hours. Mathematics courses through MATH 22005. Prerequisites: ADED 32268.

**42275 Teaching Social Studies in Secondary Schools (3)**

An advanced special methods course designed to prepare future social studies teachers for student teaching and their entry year into the profession. Addresses a range of topics and issues in an in-depth manner through project-oriented learning activities. Prerequisite: ADED 32275 and admission to advanced study.

**42277 Topics in Secondary School Science Teaching (3)**

Analysis of trends in science teaching and materials and methods for introducing topics from the history of science and from health education. Prerequisite: ADED 32277 and admission to advanced study.

**42278 Assessment in Language Arts (3)**

Models, principles and strategies for assessing student learning in integrated English language arts. Practice with multiple assessment measures including portfolios for literature, language and composition studies. Prerequisite: ADED 32147 and admission to advanced study.

**42292 Field Work Practicum (1-4)**

A minimum 96-hour field experience in middle or high school, observations, interviews, designs and teaching of lessons and debriefing. Prerequisites: minimum grade of C (2.0) in one of the following courses: ADED 32268 or 32275 or 32277 or SEED 32147. Corequisite: ADED 42268 or 42275 or 42277 or 42278.

**42295 Special Topics in ADED (1-3)**

Prerequisite: special approval.

**42357 Secondary Student Teaching (9)**

Provides a 12-week student-teaching experience. See Student Teaching section of this *Catalog*. S/U grading; IP grade permissible. Prerequisite: admission to advanced study.

**42358 Secondary Student Teaching (4)**

Provides a 10-week student teaching experience. See Student Teaching section of this *Catalog*. S/U grading; IP grade permissible. Prerequisite: ADED 42292 and admission to advanced study.

\*Course ineligible to be repeated for GPA recalculation.

\*\*Courses offered only at Regional Campuses.

49525 *Inquiry into Professional Practice (3)*  
Reflection on teaching for the purpose of instructional improvement. Emphases are placed on preparing, implementing and assessing a curricular it; collaborative problem solving; conducting an action research project; and creating a portfolio. Prerequisite: admission to advanced study. Corequisite: AED 42358.

## AEROSPACE STUDIES (ASTU)

### 10101 *The Foundation of the United States Air Force I (1)*

Survey course providing an introduction to the U.S. Air Force and ROTC. Officership and military customs and courtesies are discussed. Foundations of Air Force communication are covered. Prerequisite: none.

### 10102 *The Foundation of the United States Air Force II (1)*

Survey course looks at the origin and organization of the Air Force. Selected topics contributing to an understanding of the Air Force are covered. Prerequisite: none.

10103, 10104 *Leadership Laboratory (1 Each)*  
An instructional program that prepares an individual to undertake the broad range of technical tasks associated with military leadership and defense management. This course is optional for university academic credit; however, it is mandatory for Air Force ROTC credit for scholarship or commissioning purposes. S/U grade permissible. Prerequisite: none.

### 20101 *Evolution of United States Air Force Air and Space Power I (1)*

Survey course examines air and space power from an historical perspective. Course covers early flight and World War I to the Korean War and ICBMS. Prerequisite: none.

### 20102 *Evolution of the United States Air Force Air and Space Power II (1)*

Survey course examines air and space power from an historical perspective. Course covers period from the Vietnam War to the Gulf War plus a look at the Air Force of the future. Prerequisite: none.

20103, 20104 *Leadership Laboratory (1 Each)*  
An instructional program that prepares an individual to undertake the broad range of technical tasks associated with military leadership and defense management. This course is optional for university academic credit; however, it is mandatory for Air Force ROTC credit for scholarship or commissioning purposes. S/U grade permissible. Prerequisite: none.

### 30101 *Leadership Studies I (3)*

Study of leadership, professional knowledge and communication skills required for an Air Force officer. The role of a leader as supervisor and counselor is discussed. Prerequisite: special approval.

### 30102 *Leadership Studies II (3)*

Study of quality management fundamentals and communication skills for the Air Force officer. The Air Force personnel evaluation system and military ethics are discussed. Prerequisite: special approval.

### 30103, 30104 *Leadership Laboratory (1 Each)*

An instructional program that prepares an individual to undertake the broad range of technical tasks associated with military leadership and defense management. This course is optional for university academic credit; however, it is mandatory for Air Force ROTC credit for scholarship or commissioning purposes. S/U grading. Prerequisite: none.

### 40101 *Defense Studies I (3)*

Course examines the political, economic and social constraints upon national security and defense structure. The role of the military, including joint operations, is discussed. Regional defense issues studies. Prerequisite: special approval.

### 40102 *Defense Studies II (3)*

The role of the military and regional defense are studied. Current Air Force issues and other topics relevant to preparing an Air Force officer for active duty are covered. Prerequisite: special approval.

### 40103 *Leadership Laboratory (1)*

An instructional program that prepares an individual to undertake the broad range of technical tasks associated with military leadership and defense management. This course is optional for university academic credit; however, it is mandatory for Air Force ROTC credit for scholarship or commissioning purposes. S/U grading. Prerequisite: none.

### 40104 *Leadership Laboratory (1)*

An instructional program that prepares an individual to undertake the broad range of technical tasks associated with military leadership and defense management. This course is optional for university academic credit; however, it is mandatory for Air Force ROTC credit for scholarship or commissioning purposes. S/U grading. Prerequisite: none.

## AMERICAN SIGN LANGUAGE (ASL)

*For placement and credit in foreign language courses see Arts and Sciences—Foreign Language Requirement—Placement and Credit.*

### 19201 *Elementary American Sign Language I (4)*

(Cross-listed with SPED 19201) An introduction to American Sign Language and deaf culture. Development of the beginning visual-receptive ASL skills and introductory expressive skills. Prerequisite: none.

### 19202 *Elementary American Sign Language II (4)*

(Cross-listed with SPED 19202) A continuation of the introduction to American Sign Language and deaf culture. Continued development of basic visual-receptive ASL skills and expressive skills. Prerequisite: ASL 19201 or SPED 19201.

### 29201 *Intermediate American Sign Language I (3)*

(Cross-listed with SPED 29201) Development of ASL fluency in expressive and receptive mode to intermediate level. Continue to increase awareness of deaf cultural values, customs and conversational habits. Prerequisite: ASL 19202 or SPED 19202.

### 29202 *Intermediate American Sign Language II (3)*

(Cross-listed with SPED 29202) Development of ASL fluency in expressive and receptive mode to beginning advanced level. Continue to increase awareness of deaf culture values, customs and conversational habits. Prerequisite: ASL 29201 or SPED 29201.

### 39201 *Advanced American Sign Language I (3)*

(Cross-listed with SPED 39201) Development of ASL fluency in expressive/receptive modes to advanced levels to enable communication at conversational speed with unfamiliar deaf individuals. Focus on differences in sign according to gender and age. Increased awareness of deaf cultural values, customs, conversational habits. Prerequisite: ASL 29202 or SPED 29202.

### 39202 *Advanced American Sign Language II (3)*

(Cross-listed with SPED 39202) ASL fluency expressive and receptive modes to advanced levels; enable fluent communication with unfamiliar deaf individuals using culturally, situational gender- and register-specific conversational repair strategies when needed. Increased awareness of deaf cultural values. Prerequisite: ASL 39201 or SPED 39201.

**49092 Deaf Residential School Practicum (1-3)**  
(Cross-listed with SPED 43092) Week long practicum at a residential school for the deaf; 24-hour interaction with deaf students and adults. Students stay on campus. Students' conduct, interaction, sign language skills, maturity, responsibility and performance are evaluated by staff at the school. S/U grading. Prerequisites: ASL 29202 or SPED 29202; and ASL 49309.

**49096 Individual Investigation (2-3)**  
(Cross-listed with SPED 43996) Individual investigation of problems in American Sign Language, ASL pedagogy and/or deaf culture. IP grade permissible. Prerequisite: departmental special approval.

**49101 Deaf Culture and Community (3)**  
(Cross-listed with SPED 43101) Exploration of historical events and figures from a deaf community perspective. Life experiences of "typical" deaf individuals as minority culture representatives interacting with majority culture institutions and processes as depicted in narrative storytelling and folklore. Prerequisite: none.

**49105 Signed English and Manually Coded English Systems (3)**  
(Cross-listed with SPED 43105) Receptive and expressive use of English-based sign language systems; ASL root words, prefix/suffix use, simultaneous speaking and signing. Experience with signing exact English, total communication systems, pidgin signed English, contact sign language, manually coded English and English signing systems. Prerequisite: ASL 29202.

**49108 American Sign Language Linguistics and Usage (3)**  
(Cross-listed with SPED 43108) Analytical study of American Sign Language syntax, semantics, morphology, and pragmatics; comparison of spoken languages and ASL using the stokoe system, impact of educational setting characteristics on linguistic processes. Prerequisite: ASL 29202.

**49309 Introduction to Deaf Studies (3)**  
(Cross-listed with SPED 43309) Introductory survey course provides informational base and understanding of experiences of deaf people as a cultural minority. Includes etiology and prevalence data, service delivery systems, diagnosis and assessment of issues and communication systems. 20 field hours. Prerequisite: none. This course may be used to satisfy the writing-intensive requirement with approval of major department.

\*Course ineligible to be repeated for GPA recalculation.  
\*\*Courses offered only at Regional Campuses.

## AMERICAN STUDIES (AMST)

**10001 Introduction to American Studies (3)**  
Exposure to culture theory, analysis of major patterns and periodization in American culture. Required for American studies majors; also for elective credit. Prerequisite: none.

**40095 Special Topics (3)**  
Selected subjects and/or themes in American culture. Prerequisites: junior standing and special approval.

**40096 Individual Investigation (1-3)**  
(Repeated registration permissible) Individual research project. Prerequisites: senior standing and special approval.

**40197 Senior Colloquium (3)**  
Intensive research into comparative culture pattern or theme, reading and discussion. Prerequisites: senior standing and special approval.

## ANTHROPOLOGY (ANTH)

**18210 Introduction to Cultural Anthropology (3)**  
Exploration of human diversity through the analysis of world cultures. Prerequisite: none. This course may be used to satisfy the Liberal Education Requirements (LER) and diversity requirement.

**18420 Introduction to Archaeology (3)**  
Archaeology is the study of the human past using material remains. The themes of time, change and human diversity will be emphasized as students learn about ancient societies and how they teach us about ourselves. Prerequisite: none. This course may be used to satisfy the Liberal Education Requirements (LER) and diversity requirement.

**18630 Human Evolution (3)**  
Introduction to basic evolutionary theory with a focus on the emergence and progressive development of the human species during the last five million years. Includes related topics such as primate behavior and human variation. Prerequisite: none. This course may be used to satisfy the Liberal Education Requirements (LER).

*Students planning on majoring or minoring in anthropology in the College of Arts and Sciences must enroll in ANTH 38630. Students who are neither majoring nor minoring in anthropology should enroll in ANTH 18630.*

**18631 Issues in Human Evolution (1)**  
Laboratory study of primate and human anatomy; human paleontology; Mendelian, molecular and human genetics; and primate behavior, ecology and conservation. Pre/corequisite: ANTH 18630. Special fee: \$20 flat fee—subject to change. This course may be used to satisfy the Liberal Education Requirements (LER).

**38050 Theory in Cultural Anthropology (3)**  
Development of anthropological thought. Prerequisites: ANTH 18210.

**38096 Individual Investigation in Anthropology (1-3)**  
Readings and/or research supervised by a member of the anthropology staff. IP grade permissible. Prerequisite: special approval.

**38240 Culture and Personality (3)**  
Comparative cross-cultural socialization and personality development; group and national character; relationship of personality to politics, social and occupational roles. Prerequisite: ANTH 18210 or SOC 12050. This course may be used to satisfy the diversity requirement.

**38250 Religion: A Search for Meaning (3)**  
How human beings search for meanings in religious experience; the universality and cultural conditioning of this phenomenon. Prerequisite: ANTH 18210.

**38292 Field Work in Cultural Anthropology (3)**  
Practical experience carrying out field research in cultural anthropology under the supervision of members of the anthropology faculty. Prerequisite: ANTH 18210 or SOC 12050.

**38420 Prehistory: Urbanism (3)**  
Survey of evolution of urban society, emphasizing development of food production, village-farming community, and urban life in Old and New Worlds. Prerequisite: ANTH 18420.

**38430 Lithics (3)**  
History of chipped-stone flint working and toolmaking is traced from man's earliest beginnings through the spread of ground stone tools. These developments are examined chronologically, spatially and functionally. Prerequisite: ANTH 18420.

**38480 Archaeological Analysis (3)**  
Methods necessary for the description and lab analysis of prehistoric remains. Course will include lab exercises as well as class lectures. Prerequisites: ANTH 18420. This course may be used to satisfy the writing-intensive requirement with approval of major department.

**38490 Quantitative Anthropology (3)**

Introduces the quantitative description of numerical data, provides an understanding of the basis of probability theory and statistical inference and acquaints the student with the role of computers in anthropology. Prerequisite: ANTH 18420 or 18630 or 38630.

**38492 Field Work in Archaeology (3)**

Field and lab techniques in archaeological research. Prerequisite: special approval.

**38630 Principles of Biological Anthropology (3)**

Review of fundamental subfields of modern biological anthropology, including human population genetics, primate paleontology, human evolution and modern human taxonomy and variation. Prerequisite: none.

**38680 Primate Societies (3)**

This course will be a survey of the behavior of living primates. Topics covered include reproductive and foraging strategies, social structure and primate conservation. Antecedent human behavior will also be considered. Prerequisite: ANTH 18630 or 38630.

**48093 Variable Title Workshop in Anthropology (1-6)**

Classroom discussions and field study activity focused on professional and disciplinary concerns. Specific content varies with workshop group. S/U grading. Prerequisites: special approval.

**48095 Special Topics in Anthropology (3)**

Offered irregularly when unusual resources and/or opportunities permit. Topic announced when scheduled. Prerequisites: ANTH 18210 or 18420.

**48210 Culture and Communication (3)**

Relationship between language and culture. Covers basic principles of formal linguistics and their use in anthropology; case studies from ethnography of speech. Prerequisites: ANTH 18210 or SOC 12050.

**48212 Kinship and Social Organization (3)**

This course employs cross-cultural approaches to the understanding of marriage, family organization, descent and kinship systems. Prerequisite: ANTH 18210. This course may be used to satisfy the diversity requirement.

**48214 Politics of Culture (3)**

This course will address the way in which culture has been politicized. It will look at issues such as cultural relativism and objectivity in anthropological studies with reference to specific peoples and geographic areas. Prerequisite: none. This course may be used to satisfy the writing-intensive requirement with approval of major department.

**48220 Cultural Ecology (3)**

Analysis of the relationship between socio-cultural systems and the physical-biological environment. Prerequisites: ANTH 18210.

**48225 Archaeology of Death (3)**

From excavations of prehistoric burial mounds to studies of colonial gravestones, the archaeology of death has always occupied a prominent place in anthropological research. The course explores approaches to diverse meanings of life and death. Prerequisites: ANTH 18420.

**48230 Socio-Cultural Change (3)**

Analysis of institutional change where peoples of different cultures are in sustained contact. Prerequisites: ANTH 18210.

**48240 The Symbolic Imperative (3)**

Studies the problem of cultural meanings from the perspective of symbols: the objects, persons, relations and acts through which people communicate with each other and perceive order in their cultures. Prerequisites: ANTH 18210 or SOC 12050.

**48250 Culture and Curing (3)**

Examination of the relationship between cultural beliefs about the nature of reality and the essence of humanity, and the causation and alleviation of disease. Prerequisite: ANTH 18210. This course may be used to satisfy the diversity requirement.

**48260 Culture Conflict (3)**

Analyzes structured conflict situations between widely different cultures, both simple and complex, including intertribal conflict, colonial conflict and problems arising from contact between dominant and subdominant social systems. Prerequisite: ANTH 18210. This course may be used to satisfy the diversity requirement.

**48270 Native Peoples of North America (3)**

Comparative analysis of North American Indian peoples and cultures with special reference to linguistic groupings, cultural areas and contemporary issues. Prerequisites: ANTH 18210.

**48291 Seminar in Revolution and Culture Change (3)**

The seminar deals with the interrelationship between culture and revolution since antiquity. The main focus is on dramatic and abrupt culture change. Prerequisite: ANTH 18210.

**48391 Seminar in History of Anthropology (3)**

Seminar focusing on the development of anthropology within the intellectual and historical context from the height of the enlightenment to the close of World War II. Prerequisite: ANTH 18210.

**48410 Stone Age Archaeology (3)**

Survey of Old World cultural history, using archaeological data. Stresses the period of three million years ago to 10,000 years ago. Prerequisites: ANTH 18420 and junior standing.

**48420 Archaeology of North America (3)**

Survey of major North American and Mexican archaeological sequences with emphasis on inter-area relationships. Prerequisites: ANTH 18420 and junior standing.

**48425 Ancient Mesoamerica (3)**

Comparative analysis of Mesoamerican societies from the arrival of the first Americans over 10,000 years ago to European colonization in the 16th century A.D.; including major pre-Columbian civilizations. Prerequisites: ANTH 18420.

**48440 Archaeology of Ancient Ohio (3)**

Cultural evolution and human-environmental relationships in the ancient Ohio region documenting an 11,000-year period from initial occupation to the beginning of European written history. Prerequisites: ANTH 18420.

**48450 States and Empires (3)**

This course presents a comparative analysis of both Old and New World case histories to explore definitions, causal explanations and organizational parameters associated with prehistoric state and empire-level societies. Prerequisite: ANTH 18420.

**48630 Pacific Island Cultures (3)**

Peoples and characteristics of culture areas of Pacific Islands, including Polynesia, Melanesia and Micronesia, with analysis of several representative cultures from these areas. Prerequisites: ANTH 18210. This course may be used to satisfy the diversity requirement.

**48692 Field Work in Biological Anthropology (3)**

Can be applied to any bioanthropology field of study and off-campus activity, ranging from museum work to U.S. and international research projects. Prerequisite: special approval.

**48810 Human Paleontology (3)**

Study of primate fossils of the Miocene and Pliocene to include the origins of humans and their earliest ancestors. Prerequisite: ANTH 38630.

**48820 Human Musculo-skeletal System (3)**

A largely hands-on course introducing the study of human anatomy for students interested in biological anthropology and archaeology. Topics include skeletal and functional anatomy, biomechanics, and estimation of age and sex from isolated bones. Prerequisite: ANTH 38630.

**48830 Human Behavioral Ecology and Evolution (3)**

How "unique" is human behavior? Using an evolutionary perspective, we will explore the evolution of human mating systems and parental investment. Prerequisite: ANTH 18630 or 38630 or BSCI 30156. This course may be used to satisfy the writing-intensive requirement with approval of major department. This course may be used to satisfy the diversity requirement.

**48835 Primate Ecology and Conservation (3)**

Study of the geographic distribution and evolutionary ecology of prosimians, monkeys and apes and the human and climatic effects on their long-term survival. Prerequisite: ANTH 18630 or 38630 or 38680 or BSCI 10120.

**48840 Natural Selection in Perspective (3)**

The course provides an in-depth introduction into the theory of natural selection by reading both Darwin's original work and recent interpretations. Prerequisite: ANTH 18630 or 38630 or BSCI 10120.

**ARABIC (ARAB)**

**11101 Elementary Arabic I (4)**

Introduction to Modern Standard Arabic and colloquial Arabic in the context of the cultures of Arabic speakers. Prerequisite: none.

**11102 Elementary Arabic II (4)**

Continuation of the introduction to Modern Standard Arabic and colloquial Arabic in the context of the cultures of Arabic speakers. Prerequisite: ARAB 11101.

**21201 Intermediate Arabic I (4)**

Continued development of speaking, listening, reading and writing skills in Arabic, using a variety of cultural materials. Prerequisite: ARAB 11102.

**21202 Intermediate Arabic II (4)**

Continuation of ARAB 21201. Prerequisite: ARAB 21201.

**31301 Advanced Arabic I (4)**

Continuation of the study of Modern Standard Arabic and colloquial Arabic in the context of Arab cultures. Further development of listening, speaking, reading and writing skills, using a variety of cultural materials. Prerequisite: ARAB 21202.

**31302 Advanced Arabic II (4)**

Continuation of ARAB 31301. Prerequisite: ARAB 31301.

\*Course ineligible to be repeated for GPA recalculation.

\*\*Courses offered only at Regional Campuses.

**ARCHITECTURE AND ENVIRONMENTAL DESIGN (ARCH)**

**10001 Understanding Architecture (3)**

The nature of the built environment, its forms and functions are explored within the cultural contexts of ecology, technology, human behavior, symbolism, art and history. Prerequisite: none. This course may be used to satisfy the Liberal Education Requirements (LER).

**10011 Survey of Architectural History I (3)**

History of architecture from Neolithic times through the 14th century. Prerequisite: not open to architecture majors. This course may be used to satisfy the Liberal Education Requirements (LER).

**10012 Survey of Architectural History II (3)**

History of Western architecture from the Renaissance to the early 20th century. Prerequisite: ARCH 10011; not open to architecture majors. This course may be used to satisfy the Liberal Education Requirements (LER).

**10093 Workshop: Variable Title (1-3)\***

(Repeated registration permissible) Variable topics. S/U grading. Prerequisite: special approval.

**10101 First Year Design Studio I (3)**

Introduction to the fundamental principles of visual organization, structural organization, graphic communications, historical precedence and current directions in architecture. Graphic techniques include freehand drawing and technical orthographics, axonometrics and perspectives. Prerequisite: architecture (ARCH) majors only. Admission to first year of Bachelor of Science program. Special fee: \$20 flat fee—subject to change.

**10102 First Year Design Studio II (3)**

Investigations into strategies of form making through the introduction of client, type, context, site and form/space theories, 2-D and 3-D representation techniques and analysis of related reference architects. Prerequisite: ARCH 10101. Special fee: \$20 flat fee—subject to change.

**10111 History of Architecture I (3)**

History of western architecture from prehistory to the European Gothic period. Prerequisite: architecture (ARCH) or architectural studies (ARCS) major.

**10121 Representation of Design I (3)**

A survey of the techniques and assumptions of basic architectural design concepts and representation of the built environment through analytical and synthetic exercises that introduce fundamental design skills. In order to integrate students into the college and the field, the exercises are supplemented by readings in contemporary visual culture. Prerequisite: admission to the College of Architecture and Environmental Design.

**10122 Representation of Design II (3)**

Continuation of ARCH 10121 with an emphasis on 3-D thinking and representation, critical skills and the role of images in architectural culture and society. The course also introduces the wider application of design principles in graphic design, digital media and the visualization of information. Prerequisite: ARCH 10101 or 10121.

**20101 Second Year Design Studio I (3)**

The introduction of a building design process that emphasizes the integration of program requirements with specific form typologies using line and plane as the primary elements to provide shape and space. Prerequisite: ARCH 10102. Special fee: \$20 flat fee—subject to change.

**20102 Second Year Design Studio II (3)**

The introduction of a building design process that emphasizes the integration of program requirements with form typologies that are both influenced and informed by specific site context. Line and plane and primary configurational shapes are again incorporated to develop building form solutions. Prerequisite: ARCH 20101. Special fee: \$20 flat fee—subject to change.

**20112 History of Architecture II (3)**

History of western architecture from the Renaissance to the early 20th century. Prerequisites: architecture (ARCH) or architectural studies (ARCS) major.

**20113 History of Architecture III (3)**

A history of 20th-century architecture. Prerequisite: ARCH 20112 and architecture (ARCH) or architectural studies (ARCS) major.

**20121 Studio for Architectural Studies I (4)**

An introduction to basic issues in architectural design and composition. Through sketch projects and design exercises in a variety of media, students gain a familiarity with basic architectural problems and the kinds of thinking architects use to address those problems. Prerequisite: ARCH 10122 or 10102.

**20122 Studio for Architectural Studies II (4)**

Studio allows students to further develop their design skills in relation to a theme or shared research topic that crosses the disciplinary boundaries of architecture and challenges conventional ideas of the role design can play in developing knowledge. Prerequisite: ARCH 20121 or 20101.

**20201 Beyond Western Architecture (3)**

Course introduces students to the broad realm of contributions to world architecture made by cultures and civilizations which are not in the traditional sphere of Western/European influence. Prerequisite: ARCH 10111 and 20112.

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**20301 Introduction to Building Structures (3)**  
An introduction to building structures, statics, strength of materials, analysis for shear-moment-displacement, loads including dead-live-wind-earthquake and building code requirements for structural safety. Prerequisites: open to junior and senior architecture (ARCH) or architectural studies (ARCS) or fine arts (ARTS) or interior design (ID) majors.

**20601 Computer Applications in Architecture I (1-3)**

Course provides a basic understanding of two-dimensional CAD operations, parametric building design and building information modeling (BIM). Prerequisite: architecture (ARCH) or architectural studies (ARCS) or interior design (ID) major.

**20602 Computer Applications in Architecture II (1-3)**

Principles and practices of 3D digital modeling and rendering, including: production of geometric surfaces and forms using polygon construction, texturing, lighting and rendering. Prerequisites: ARCH 20601 and architecture (ARCH) or architectural studies (ARCS) or interior design (ID) major.

**20693 Workshop: Computer Applications (3)\***  
(Repeated registration permissible) Computer workshops are intended to provide an exposure to various fundamental computer topics and their application to architectural studies. Topics include file management, network applications, spreadsheets, raster image manipulations, two- and three- dimensional CAD and computer-aided visualization. S/U grading. Prerequisite: architecture (ARCH) and interior design (ID) majors only.

**30001 Site Design (1)**

Research component addressing technical, cultural and contextual concerns, influences and directions in site design. Corequisite: ARCH 30101 and architecture (ARCH) major with approved admission to advanced study (third year). This course may be used to satisfy the writing-intensive requirement with approval of major department.

**30002 Urban Design (1)**

Lecture/seminar/research component conducted concurrently with ARCH 30102 addressing design of form and space in cities through study of precedents, traditions, current directions in urban form making. Corequisite: ARCH 30102. Prerequisites: ARCH 30001 and 30101.

**30012 Urban Design, Florence, Italy (1)**

Lecture/seminar/research component addressing design of form and space in cities through study of precedents, traditions, current directions in urban form making. Corequisite: ARCH 30112. Prerequisite: ARCH 30101.

**30022 Urban Design and Urban Writing (3)**

Starting in the 1960s, a series of theorists attempted to understand the city as a form of writing, producing some of the most influential design books of the last generation. This course investigates this literature, using a range of writing exercises in which students interpret both urban space and the writing it inspires. Prerequisite: ARCH 20113.

**30101 Third Year Design Studio I (5)**

Studio investigation of the simultaneous concerns of program, site, context and materials of construction. Specific emphasis on the understanding of the goals, objectives, intentions and parameters of site/context in design, including cultural influences. Prerequisites: architecture (ARCH) major with approved admission to advanced study (third year). Corequisite: ARCH 30001. Special fee: \$20 flat fee—subject to change.

**30102 Third Year Design Studio II (5)**

Studio investigation with specific emphasis on the understanding of the goals, objectives, intentions and parameters of urban design. Corequisite: ARCH 30002. Prerequisite: ARCH 30101. Special fee: \$20 flat fee—subject to change.

**30112 Third Year Design Studio II—Florence, Italy (5)**

Studio investigation with specific emphasis on understanding of the goals, objectives, intentions and parameters of urban design. Corequisite: ARCH 30012. Prerequisite: special approval. Special fee: \$20 flat fee—subject to change.

**30301 Structural Systems I (3)**

A continuation of building structures, statics, strength of materials and systems analysis. Emphasis is on elastic materials, allowable stresses and design for wood and steel structural members and systems. Prerequisites: ARCH 20301 and architecture (ARCH) major with approved admission to advanced study (third year).

**30321 Structural Typology (3)**

Course provides a noncomputational introduction to structural principles, materials and building technologies. Historical and contemporary examples are used as case studies. The goal of the course is to give students an understanding of the role structural engineering and materials science play in design thinking and how they can drive design innovation. Prerequisite: ARCH 20102 or 20122.

**30401 Methods and Materials I (3)**

Introduction to the origins, extraction, properties and processing of the basic materials of construction. Primary focus on wood and masonry—appropriate use and scale including code requirements, methods of construction and design consequences. Prerequisites: architecture (ARCH) major with approved admission to advanced study (third year).

**30421 The Environmental Imperative (3)**

Course begins with a historical introduction to the transformative role played by environmental technologies in modern architecture. This discussion is then brought into the present through an introduction to a wide range of contemporary thinking about sustainability in architecture and urbanism. Prerequisite: ARCH 20102 or 20122.

**30501 Environmental Technology I (3)**

Basic principles of ecological design and architecture environmental systems including lighting, sonic and thermal systems. Prerequisites: PHY 13012 and architecture (ARCH) major with approved admission to advanced study (third year).

**40001 Sustainable Design (1)**

Research component addressing precedents, traditions, current directions in conservation of natural environment. Principles and methods of ecological design in architecture and urban design. Prerequisites: ARCH 30102 or 30112. Corequisite: ARCH 40101. This course may be used to satisfy the writing-intensive requirement with approval of major department.

**40002 Systems Design (1)**

Lecture and research component addressing comprehensive integration of mechanical, electrical, communications, structural, life safety systems and sustainable design concerns. Corequisite: ARCH 40102. Prerequisite: ARCH 40101.

**40101 Fourth Year Design Studio I (5)**

Studio investigation of complex formal and spatial constructs addressing the comprehensive concerns of architecture. Special emphasis on understanding the conservation of the natural environment. CAD is required. Corequisite: ARCH 40001. Prerequisite: ARCH 30102 or 30112. Special fee: \$20 flat fee—subject to change.

**40102 Fourth Year Design Studio II (5)**

Studio investigation of the comprehensive concerns and understanding of building systems integration. CAD is required. Corequisite: ARCH 40002. Prerequisite: ARCH 40101. Special fee: \$20 flat fee—subject to change.

**40302 Structural Systems II (3)**

A continuation of building structures, statics, strength of materials and systems analysis. Emphasis is on inelastic materials, allowable stress and design for masonry and concrete structural members and systems. Prerequisite: ARCH 30301.

**40402 Methods and Materials II (3)**

Continued investigation of the origins, extraction, properties and processing of the basic materials of construction. Primary focus on concrete and steel—appropriate use and scale including allied systems and building materials, including glazing and interiors. Introduction to construction contract documents. Prerequisite: ARCH 30401.

**40502 Environmental Technology II (3)**

Ecological design of large buildings. The investigation and analysis of lighting, thermal, water, electrical and waste systems in urban settings. Prerequisite: ARCH 30501.

**44611 Portfolio (1)**

Architectural drawings and other allied work of the student reproduced and assembled in a professional portfolio suitable for job and graduate application. Prerequisite: ARCH 40101.

**45001 Professional Practice: Real Estate and Development (3)**

Introduction to the economic, social, ethical, legal impact on/of development in both the public and private sectors. Computer applications and case study analysis is required. Prerequisite: admission to Bachelor of Architecture professional program.

**45002 Professional Practice: Contract and Planning Law (3)**

The course surveys laws relating to the practice of architecture and dispute resolution with emphasis on contract laws contrasted with laws of negligence and the standard of care in the profession. Planning law surveys land use control mechanisms as seen through zoning, variances and practical applications. Prerequisite: admission to Bachelor of Architecture professional program.

**45003 Professional Practice: Leadership and Ethics (3)**

This course discusses leadership on several professional scales including architectural and urban, with emphasis on problem identification and problem solving within an ethical framework. Prerequisite: admission to Bachelor of Architecture professional program.

**45004 Professional Practice: Office and Financial Management (3)**

The course examines various architectural office structures and management approaches, laws pertaining to professional registration and practice, the use of consulting engineers, and financial management of the architect's office in the context of the profession as a business. Prerequisite: admission to the Bachelor of Architecture professional program.

**45093 Workshop: Professional Practice (1-3)**

(Repeatable for a total of 3 credit hours) Variable topic workshop related to architectural professional practice. S/U grading. Prerequisite: admission to Bachelor of Architecture professional program.

**45101 Fifth Year Design Studio I (6)**

The studio intends to investigate a new scale of environmental issues which integrate both architectural and urban planning. Included are site visits, data collection, design of a master plan and an architectural form response to a segment of the total conceptual plan. Prerequisite: admission to the Bachelor of Architecture professional program. Special fee: \$15 flat fee—subject to change.

**45102 Fifth Year Design Studio II (3-6)**

(Repeatable for a total of 6 credit hours) Advanced design studio emphasizing comprehensive and independent investigation—exploring and manifesting ideas through architecture using competitions and hypothetical or real projects as vehicles of expression. Prerequisite: faculty special approval required. Special fee: \$2.50/credit hour—subject to change.

**45204 Beyond Western Traditions (3)**

An introduction to the architectural traditions of Asia, Africa, pre-colonial America and Islam. Prerequisite: ARCH 45203.

**45210 Renaissance Architecture (3)**

History and theory of Renaissance architecture from 1400 until 1600. Prerequisites: ARCH 10011 and 10012; or ARCH 10111 and 20112; or ARTH 22006 and 22007.

**45211 Baroque Architecture (3)**

History and theory of architecture in Europe from 1600 through 1750. Prerequisites: ARCH 10011 and 10012; or ARCH 10111 and 20112; or ARTH 22006 and 22007.

**45220 American Architecture: Colonial to 1900 (3)**

History of American architecture for Spanish, French, Dutch and English colonization through the 19th century. Prerequisite: ARCH 10011 and 10012; or ARCH 10111 and 20112; or ARTH 22006 and 22007.

**45230 Frank Lloyd Wright (3)**

Examination of the life, buildings and literary works of Frank Lloyd Wright with emphasis on his contributions to American art and architecture and his place in American intellectual history. Prerequisite: ARTH 22007 or ARCH 20112.

**45291 Seminar: Variable Topics in Architectural History (1-3)**

(Repeatable for a total of 3 credit hours) Content varies. Prerequisite: special approval.

**45391 Seminar: Structures III (1-3)**

(Repeatable for a total of 3 credit hours) A continuation of building structures, statics, strength of materials and systems analysis. Emphasis is on complex systems, including horizontal long span and high-rise structures. Computer analysis is required. Prerequisite: ARCH 40302.

**45491 Seminar: Methods and Materials III (1-3)**

(Repeatable for a total of 3 credit hours) Advanced topics in methods and complex materials systems. Computer modeling and field experiences are required. Prerequisite: ARCH 40402.

**45591 Seminar: Environmental Technology III (1-3)**

(Repeatable for a total of 3 credit hours) Variable topics in environmental technology—environmental design and energy conservation, advanced lighting techniques, etc. Prerequisite: ARCH 40502.

**45601 Advanced Computer Applications (1-3)**

(Repeatable for a total of 3 credit hours) This course discusses advanced visualization techniques such as raytracing, radiosity and animation, and presents a variety of presentation issues and options. Prerequisite: special approval; admission to third year.

**45610 (Re)constructing Architecture (3)**

The representation of race, gender and nationalistic ideologies within architectural practice and form. Prerequisite: open to junior and senior architecture (ARCH) and interior design (ID) and fine arts (ARTS) majors. This course may be used to satisfy the diversity requirement.

**45611 Design Theory and Criticism: Twentieth Century (1-3)**

(Repeatable for a total of 3 credit hours) Design theory and criticism of architecture in the 20th century. Prerequisite: none.

**45620 Introduction to Preservation (1-3)**

(Repeatable for a total of 3 credit hours) An overview of preservation including building analysis, conservation, adaptive reuse, economic benefits of preservation planning as a revitalizing strategy. Prerequisite: special approval.

\*Course ineligible to be repeated for GPA recalculation.

\*\*Courses offered only at Regional Campuses.

**45621 Current Issues in Historic Preservation (1-3)**

(Repeatable for a total of 3 credit hours) Course in which practicing professionals including architects, planners, developers and government officials present preservation-related work. Prerequisite: special approval.

**45630 Introduction to Landscape Architecture (1-3)**

(Repeatable for a total of 3 credit hours) Introduction to landscape design with emphasis upon the relationship between landscape and buildings. Prerequisite: none.

**45631 Site Analysis and Design (1-3)**

(Repeatable for a total of 3 credit hours) Analysis of environmental factors as a basis for site selection and site planning. Prerequisite: none.

**45632 Urban Ecology (1-3)**

(Repeatable for a total of 3 credit hours) Understanding the built environment as an integral component of an overall ecological system. Emphasis is on the need for a collaborative multidisciplinary and community-based ecological design process, sustainable ethic and cultivating an awareness of nature in the city. Prerequisite: none.

**45640 Developing Environments for Older Adults (1-3)**

(Repeatable for a total of 3 credit hours) Research of existing built environments and an investigation of the planning design process for the elderly. Prerequisite: none.

**45701 Urban Design Studio I (3-6)**

(Repeatable for a total of 6 credit hours) Introduction to urban design and its relationship to other design disciplines through analysis of neighborhoods and definition of comprehensive area improvement programs. Prerequisite: special approval.

**45702 Urban Design Studio II (3-6)**

(Repeatable for a total of 6 credit hours) Urban design exploration of the formal relationships between buildings, open spaces and streets in the development of high density, mixed-use projects. Prerequisite: special approval.

**45703 Theories and Principles of Urban Design I (1-3)**

(Repeatable for a total of 3 credit hours) Course on the nature and utility of theory in urban design, examining the relationship between design ideologies and the theories of the environment on which they are based. Prerequisite: none.

**45704 Theories and Principles of Urban Design II (1-3)**

(Repeatable for a total of 3 credit hours) Course on the relationship between design ideologies/theories and the realities of existing spatial relationships/precedents. Prerequisite: special approval.

**45706 Socio-Political Representation in Urban Design (1-3)**

(Repeatable for a total of 3 credit hours) This course explores representation of socio-political ideas/ideology through architectural and urban design. Prerequisite: special approval.

**45707 Representation in Design (1-3)**

(Repeatable for a total of 3 credit hours) Course on the nature of communication in design and the representational tools the designer uses to give form to abstract ideas and converse with clients and colleagues. Prerequisite: none.

**45793 Workshop: Urban Design and Planning (1-3)**

(Repeatable for a total of 3 credit hours) This course provides an introduction to the scope of planning and design in the making of quality urban neighborhoods, with a particular emphasis on the role of urban design, architecture and landscape design. S/U grading. Prerequisite: none.

**46263 Modern Architecture (3)**

History and theory of architecture from the Chicago School through World War II. Prerequisites: ARCH 10111 and 20112; or ARCH 10011 and 10012; or ARTH 22006 and 22007.

**46613 Urban Design Theory (3)**

Investigation of the visual form of cities. Prerequisite: none.

**46991 Seminar: Variable Topics (1-3)**

(Repeatable for a total of 3 credit hours) Variable topic seminar. Prerequisite: special approval; approved admission to third year.

**46992 Field Study (1-3)**

(Repeatable for a total of 3 credit hours) Variable topic field experience. Prerequisite: special approval; approved admission to third year.

**46993 Workshop: Variable Topic (1-3)**

(Repeated registration permissible) Variable topic workshop. S/U grading. Prerequisite: special approval; approved admission to third year.

**46995 Special Topics (1-3)**

(Repeated registration permissible) Special topics in architecture. Prerequisite: special approval; approved admission to third year. Special fee: \$30 flat fee—subject to change.

**46996 Individual Investigation (1-3)**

(Repeatable for a total of 3 credit hours) Individual investigation. Prerequisite: special approval; prior written agreement with faculty is required.

**ART (ART)****30692 Field Experience: Experiential Learning in the Visual Arts (1-3)**

An undergraduate, experience-based learning activity carried out in a visual arts setting. Prerequisite: junior standing or above with a major of art education (ARTE) or art history (ARTH) or fine arts (ARTS) and special approval of faculty sponsor.

**40008 Professional Practices in the Visual Arts (3)**

Introduction to the concerns and practices of the professional artist/craftsperson. Prerequisite: crafts (ARTC) or fine arts (ARTS) major and senior standing. Special fees: \$90 flat fee—subject to change. This course may be used to satisfy the writing-intensive requirement with approval of major department.

**41093 Variable Title Workshop in Art (1-6)**

(Repeatable for a total of 18 hours) S/U grading. Prerequisite: special approval.

**ART CRAFTS (ARTC)****25300 Textile Arts: Pattern (3)**

An introduction to the concepts and processes of constructed pattern including plaiting, netting and weaving. Off-loom and floor loom explorations will emphasize the relationship of form and structure in textile art. An emphasis is placed on the use of non-traditional or experimental materials. Required for all craft majors. Prerequisites: ARTF 14000 and 14022. Special fee: \$45 flat fee—subject to change.

**25400 Ceramics I (3)**

This course is an introduction to ceramics as an artistic medium with focus on the handbuilding of clay objects using the pinch, coil and slab methods of construction. Prerequisites: ARTF 14000 and 14022. Special fee: \$150 flat fee—subject to change.

**25500 Enameling I (3)**

Testing and exploration of vitreous enamel as creative medium. Prerequisites: ARTF 14000 and 14022. Special fee: \$150 flat fee—subject to change.

**25600 Introduction to Glass Working (3)**

Introduction to studio glass through technique and brief history. Both basic glass blowing and glass casting techniques and problems will be covered. Prerequisites: ARTF 14000 and 14022. Special fee: \$189 flat fee—subject to change.

**25700 Introduction to Jewelry/Metals (3)**

Introduction to basic jewelry and metalsmithing techniques including fabrication, forming and finishing. Emphasis on advancing design skills and critical analysis. Exposure to historical and contemporary works. Prerequisites: ARTF 14000 and 14022. Special fee: \$150 flat fee—subject to change.

**35095 Crafts: Selected Topics (3)**

Specialized courses in crafts that focus on specific techniques and media. Prerequisite: ARTC 25300 or 25400 or 25500 or 25600 or 25700. Special fee: \$75 flat fee—subject to change.

**35300 Textile Arts: Dimensional (3)**

An introduction to the development of unique sculptural objects in textile media. Students will explore three-dimensional textile processes using the floor loom and the construction method of wrapping and coiling. Prerequisite: ARTF 14022. Special fee: \$60 flat fee—subject to change.

**35301 Fiber Arts: Screen and Block Printing (3)**

Exploration and development of fabric printing and dyeing including monoprinting and screen printing with emphasis on design and developing studio competency in medium as art form. Prerequisites: ARTF 14060 and 24040. Special fee: \$75 flat fee—subject to change.

**35302 Textile Arts: Feltmaking (3)**

An opportunity for the in-depth exploration of technical and aesthetic possibilities of this unique process. Layers and textures in two dimensions and processes for three-dimensional feltmaking are introduced and considered as an expressive vocabulary. Dyeing of wool fleece plays a major role in the course. Prerequisites: ARTF 14002 and 14060. Special fee: \$75 flat fee—subject to change.

**35303 Textile Arts: Tapestry (3)**

An introduction to a variety of traditional pictorial tapestry/weft face techniques to be executed on the frame loom and/or floor loom. Both tapestry and carpet history are presented to reveal traditional processes, patterns and images for inspiration in the creation of individual works. Dyeing will play a major role in the exploration. Prerequisites: ARTF 14022 and 14060. Special fee: \$60 flat fee—subject to change.

**35304 Textile Arts: Pictorial Weaving (3)**

An introduction to floor loom weaving processes that facilitate the development of nonrepetitive patterns and images. Techniques such as warp painting, supplementary weft and pick-up doubleweave will be explored as means of creating pictorial art cloth. Textile history will be presented as an important resource for the development of woven studies and individually conceived projects. Prerequisites: ARTF 14022 and 14060. Special fee: \$60 flat fee—subject to change.

**35350 Textile Arts: Design and Production (3)**

A basic introduction to the mechanics of designing and constructing patterned and dyed cloth on the floor loom. Learning to use the computer for the designing of woven pattern is an expectation of the course. (This is an excellent course for designers of fashion and interiors, as well as anyone interested in the design and craft of weaving.) Prerequisites: ARTF 14022 and 14060. Special fee: \$75 flat fee—subject to change.

**35400 Ceramics II (3)**

Continuation of ARTC 25400 emphasizing design, use of potter's wheel and chemistry of glazes. Prerequisite: ARTC 25400. Special fee: \$150 flat fee—subject to change.

**35600 Glass Blowing (3)**

Further exploration of glass blowing techniques. Design, form, color and execution will be emphasized. Prerequisite: ARTC 25600. Special fee: \$210 flat fee—subject to change.

**35601 Sculptural and Kiln-Formed Glass (3)**

An overview and exploration of sculptural and kiln-formed glass techniques. Casting, jusing, slumping and cold construction is covered. Design, form, content and technical execution and understanding operations of equipment is emphasized. Prerequisites: ARTC 25600 and ARTF 14055. Special fee: \$240 flat fee—subject to change.

**35700 Jewelry Concepts and Techniques (3)**

An in-depth exploration of jewelry making techniques such as casting, stone setting, mechanisms and fabrication. Conceptual development and design skills are emphasized. To gain a deeper understanding of the subject, historical and contemporary works will be viewed and discussed. Prerequisite: ARTC 25700. Special fee: \$150 flat fee—subject to change.

**35701 Metalsmithing Concepts and Techniques (3)**

Course offers an in-depth exploration of hammer-working techniques such as raising, forging and shell forming. Conceptual development and design skills are emphasized. To gain a deeper understanding of the subject, historical and contemporary

works will be viewed and discussed. Prerequisite: ARTC 25700. Special fee: \$150 flat fee—subject to change.

**35702 Enameling Concepts and Techniques (3)**

An in-depth exploration of vitreous enameling techniques on two dimensional surfaces. Porcelain enamel on steel will be introduced. Conceptual development and design skills are emphasized. To gain a deeper understanding of the subject, historical and contemporary works will be viewed and discussed. Prerequisite: ARTC 25700 and 35700. Special fee: \$150 flat fee—subject to change.

**35703 Textile Techniques in Metal (3)**

Course applies textile techniques such as weaving, crocheting, knitting and basketry to create jewelry and objects in metal. Emphasis is on innovative approach to traditional processes. Prerequisite: ARTC 25700. Special fee: \$150 flat fee—subject to change.

**45092 Field Experience Travel Study Crafts (1-3)**

Travel-based study/field experience in crafts disciplines to and at a site or sites away from Kent State University. S/U grading. Prerequisite: major in crafts (ARTC).

**45095 Crafts: Selected Topics (1-6)**

Specialized courses in crafts that focus on specific techniques and media. Prerequisite: junior standing. Special fee: \$45/credit hour—subject to change.

**45096 Individual Study: Crafts (1-6)**

(Repeatable for a total of 12 credit hours) Additional study and/or special topics in ceramics, enameling, glass, jewelry/metals or fiber arts. IP grade permissible. Prerequisite: special approval. Special fee: \$50/credit hour—subject to change.

**45099 Senior Project: Crafts (4)**

Independently conceived project in crafts submajor. Includes completion of undergraduate thesis, review presentation documentation (slide form), exhibition and faculty review. Letter grades and IP grade permissible. Prerequisite: senior standing and crafts (ARTC) major. Special fee: \$200 flat fee—subject to change.

**45301 Textile Arts: Advanced Studio (3)**

(Repeatable for a total of 6 credit hours) Structured time for individual investigations in textiles. Emphasis on self-designed study. Biweekly presentations of contemporary work in textiles and weekly discussions or critiques with open studio. IP grade permissible. Prerequisite: senior standing and crafts (ARTC) major. Special fee: \$75 flat fee—subject to change.

\*Course ineligible to be repeated for GPA recalculation.

\*\*Courses offered only at Regional Campuses.

**45400 Advanced Ceramics (2-6)**

(Repeatable for a total of 40 credit hours) Individual problems in ceramics. Prerequisite: ARTC 35400. Special fee: \$50/credit hour—subject to change.

**45500 Advanced Enameling (2-6)**

(Repeatable for a total of 30 credit hours) Advanced study in enameling allows students to work in-depth with media. Prerequisite: special approval. Special fee: \$50/credit hour—subject to change.

**45600 Advanced Glass Working (2-6)**

(Repeatable for a total of 40 credit hours) Individual exploration of sculptural and hot glass techniques. Design, form, content and execution strongly emphasized. Introduction to studio facility design, construction and maintenance. Prerequisites: ARTC 35600 and 35601. Special fee: \$75/credit hour—subject to change.

**45700 Design and Production (3)**

Course prepares students to enter the marketplace by examining production processes for creating multiples, industrial applications and marketing. Traditional rendering techniques are taught as a method for communicating with clientele in the custom design market. Design skills are emphasized. Prerequisites: ARTC 35700 and 35701. Special fee: \$120 flat fee—subject to change.

**45701 Tableware (3)**

Course explores forms made for the table such as flatware, serving sets and containers. Traditional and experimental approaches will be examined. Prerequisites: ARTC 35700 and 35701. Special fee: \$120 flat fee—subject to change.

**45702 Advanced Enameling (3)**

Course offers advanced vitreous enameling techniques on two- and three-dimensional surfaces. Conceptual development and design skills are emphasized. To gain a deeper understanding of the subject, historical and contemporary works will be viewed and discussed. Prerequisite: ARTC 35702. Special fee: \$120 flat fee—subject to change.

**45703 Large Scale Enameling (3)**

Course is an in-depth exploration of enameling on larger two-dimensional surfaces. Techniques include spraying, painting, screening and drawing with porcelain enamel on steel. Provides experience using unique large-scale flat-bed furnace. Prerequisite: ARTC 35702. Special fee: \$120 flat fee—subject to change.

**45704 Advanced Studio Jewelry Metals Enameling (3)**

Course offers structured time for individual investigations in jewelry, metalsmithing and enameling. Emphasis on self-directed study with frequent critiques and technical demos as needed. Regular viewing and discussion of historical and contemporary works. Prerequisites: ARTC 35700 and 35701 and senior standing. Special fee: \$120 flat fee—subject to change.

**ART EDUCATION (ARTE)****31001 Art Education: Foundations and Concepts (3)**

An introduction to art education concepts. Emphasis on child development and on teaching the expressive and responsive dimensions of art in the early grades. Eleven field/clinical hours are associated with this course. Prerequisite: 2.75 GPA and sophomore standing in art education (ARTE). Special fee: \$15 flat fee—subject to change.

**31004 Art Education: Teaching Practicum (3)**

A teaching experience for applying art education concepts. Analysis of instructional problems emphasized. Fifty-four field and/or clinical hours are associated with this course. Prerequisites: 2.75 GPA and ARTE 31001.

**31005 Art Education Special Topics (2-4)**

Special topics (experimental course). IP grade permissible. Prerequisite: special approval of instructor.

**31096 Individual Study—Art Education (2-10)**

Additional study in areas of a student's choice in consultation with advisor. IP grade permissible. Prerequisite: special approval.

**41002 Art Education: Methods and Materials (3)**

An examination of relationships between content, materials and strategies for teaching art. Seven field and/or clinical hours are associated with this course. Prerequisites: 2.75 GPA and ARTE 31004. Special fee: \$5 flat fee—subject to change.

**41003 Art Education: Field Experiences (3)**

(Repeatable for a total of 8 hours) A planning and teaching experience for teaching art in various settings; analysis of classroom situations emphasized. Fifty-four field and/or clinical hours are associated with this course. Prerequisites: 2.75 GPA and ARTE 31004. This course may be used to satisfy the writing-intensive requirement with approval of major department. Special fee: \$30 flat fee—subject to change.

**41009 Art Education Major Review (1)**

Examination of student's knowledge, proficiency and ability to apply concepts in art and art education. S/U grading; IP grade permissible. Prerequisite: 2.75 GPA and pre/corequisites: ARTE 41002 and 41003.

**41092 Field Experience Travel Study in Art Education (1-3)**

Travel-based study/field experience in art education to and at a site or sites away from Kent State University. S/U graded. Prerequisite: major in art education (ARTE).

**41096 Individual Study—Art Education (1-6)**

Additional study in areas of students' choice in consultation with advisor. IP grade permissible. Prerequisite: special approval.

**41525 Art Education: Inquiry into Professional Practice (3)**

Concepts and practices related to teaching art. Inquiry into art teaching as a professional practice. Emphasis is on teacher as critical, disciplined investigator. Twenty-six field and/or clinical hours are associated with this course. Prerequisites: 2.75 GPA and ARTE 41009 and special approval. Corequisite: ARTE 41557.

**41557 Art Education: Student Teaching and Seminar (9)**

Provides a 10-week student teaching experience and associated seminar. S/U grading; IP grade permissible. See Student Teaching section in *Catalog*. Prerequisites: 2.75 GPA and ARTE 41009 and special approval. Corequisite: ARTE 41525.

**ART FINE ARTS (ARTF)****14000 Drawing I (3)**

Fundamental drawing and studio experiences; exploration of basic drawing ideas and media. Work produced in this course must be retained for later portfolio presentation in ARTF 24005. Prerequisite: none. Special fee: \$22 flat fee—subject to change.

**14001 Drawing II (3)**

Continued practice in drawing with particular emphasis upon dimensional representation and pictorial structure. Work produced in this course must be retained for later portfolio presentation in ARTF 24005. Prerequisite: ARTF 14000. Special fee: \$22 flat fee—subject to change.

**14022 2D Composition (3)**

Basic introduction in flat pictorial composition for the studio or craft artist. Work produced in this course must be retained for later portfolio presentation in ARTF 24005. Prerequisite: none. Special fee: \$36 flat fee—subject to change.

**14055 Sculpture I (3)**

An introduction to the basic concepts of three-dimensional form. Work produced in this course must be retained for later portfolio presentation in ARTF 24005. Prerequisite: none. Special fee: \$66 flat fee—subject to change.

**14060 Painting I (3)**

Opaque, water-based media used to introduce fundamental form language and vocabulary of painting. Emphasis on structured study and effective use of colors. Work produced in this course must be retained for later portfolio presentation in ARTF 24005. Prerequisites: ARTF 14000. Special fee: \$25 flat fee—subject to change.

**24001 Drawing III (3)**

Emphasis on continued development of drawing with focus on nonfigurative representations of pictorial space. Work produced in this course must be retained for later portfolio presentation in ARTF 24005. Prerequisite: ARTF 14001. Special fee: \$24 flat fee—subject to change.

**24005 Sophomore Review: Fine Arts (1)**

Diagnostic review by fine arts faculty of portfolio of work selected from "foundation" courses. Student's knowledge of art history is also examined. Student must receive a passing score (above C average) to continue in degree program. Action by faculty committee may include the assignment of additional studio work over the normal graduation requirements in areas of apparent deficiencies. S/U grading; IP grade permissible. Prerequisites: ARTF 14000 and 14001 and 14022 and 14055 and 14060 and 24001 and 24010 and 24040 and ARTH 22006 and 22007.

**24010 Introduction to Fine Art Photography (3)**

Introductory studio/lecture course, which introduces fine art photography with an aesthetic, contemporary approach. Students learn traditional and digital photographic image-making applications and the historical underpinnings of the photograph in modern art. Research paper and portfolio required. Work produced in this course must be retained for later portfolio presentation in ARTF 24005. Prerequisites: ARTF 14000 and 14022. Special fee: \$60 flat fee—subject to change.

**24020 Digital Media (3)**

Introduces concepts, tools, software and guided experiences necessary for creative integration of digital skills and concepts into art practices and art research. Prerequisites: art education (ARTE) or art history (ARTH) or fine arts (ARTS) or crafts (CRFT) or crafts/fine arts (CFA) major and freshman or sophomore standing. Special fee: \$45 flat fee—subject to change.

**24040 Printmaking I (3)**

Basic traditional and contemporary techniques of relief (woodcut, lino-cut, etc.) and intaglio printing (etching, collograph, etc.). Work produced in this course must be retained for later portfolio presentation in ARTF 24005. Prerequisite: ARTF 14000. Special fee: \$45 flat fee—subject to change.

**24055 Sculpture II (3)**

Continuation of ARTF 14055 with greater emphasis on materials and processes. Prerequisite: ARTF 14055. Special fee: \$66 flat fee—subject to change.

**24060 Painting II (3)**

Continuation of work begun in ARTF 14060. Introduction to oil painting with emphasis upon direct painting from observed sources and study of expressive capabilities of painting. Prerequisite: ARTF 14060. Special fee: \$39 flat fee—subject to change.

**34001 Drawing IV (3)**

(Repeatable for a total of 9 credit hours) Further study and understanding of concepts and ideas which enable students to understand and professionally realize their drawings. Prerequisite: ARTF 24001 and a grade of S in ARTF 24005. Special fee: \$28 flat fee—subject to change.

**34002 Introduction to Figure Drawing (3)**

(Repeatable for a total of 9 credit hours) Extensive studio practice of traditional and contemporary approaches to the human figure. Critical analysis of the figure, from the Renaissance through postmodernism. Students work from a nude model. Prerequisites: ARTF 14000 and 14001 and 24001 and a grade of S in ARTF 24005. Special fee: \$66 flat fee—subject to change.

**34040 Printmaking: Intermediate Intaglio (3)**

Continuation of ARTF 24040 emphasizing individually assigned problems in intaglio with introduction to color intaglio techniques. Prerequisite: ARTF 24040 or a grade of S in ARTF 24005. Special fee: \$54 flat fee—subject to change.

**34041 Serigraphy I (3)**

The initial presentation of fundamental concepts and processes pertaining to serigraphy. This course will include printing techniques and aesthetic considerations in the making of art. Prerequisites: ARTF 24040 and a grade of S in ARTF 24005. Special fee: \$66 flat fee—subject to change.

**34042 Lithography I (3)**

Introduction to stone lithography. Techniques of drawing and printing crayon, tusche, transfer and color images and their relation to problems of drawing and composition. Prerequisites: ARTF 24040 and a grade of S in ARTF 24005. Special fee: \$45 flat fee—subject to change.

**34050 Sculpture: Life Modeling (3)**

(Repeatable for a total of 6 credit hours) Continuation of the study of the human figure in sculpture. Prerequisites: ARTF 24055 and a grade of S in ARTF 24005. Special fee: \$66 flat fee—subject to change.

**34055 Sculpture III (3)**

A sculpture course with an emphasis on other conceptual approaches beyond the more formal and aesthetic considerations explored in Sculpture II. Prerequisites: ARTF 24055 and ARTF 24005 with a grade of S. Special fee: \$66 flat fee—subject to change.

**34060 Painting III (3)**

Continuation of the painting experience in various media, using formal means of painting expressively. Prerequisites: ARTF 24060 and a grade of S in ARTF 24005. Special fee: \$30 flat fee—subject to change.

**44003 Drawing V (3)**

(Repeatable for a total of 9 credit hours) Continuation of ARTF 34001. Prerequisite: ARTF 34001 and a grade of S in ARTF 24005. Special fee: \$28 flat fee—subject to change.

**44010 Advanced Fine Art Photography (3)**

Combined studio/lecture course offering more advanced, conceptual approach to the contemporary applications of photographic imaging for artists. Students work with larger scale printing formats, more involved research and greater depth of involvement with the photographic medium. Prerequisites: ARTF 24010 and ARTF 24005 with a grade of S. Special fee: \$60 flat fee—subject to change.

**44040 Printmaking: Advanced Intaglio (3)**

(Repeatable for a total of 9 credit hours.) Continuation of ARTF 34040 with special emphasis on color and photographic techniques intaglio. Prerequisite: ARTF 34040 and a grade of S in ARTF 24005. Special fee: \$45 flat fee—subject to change.

**44041 Serigraphy II (3)**

(Repeatable for a total of 9 credit hours) Continuation of ARTF 34041 emphasizing individually assigned projects. Prerequisite: ARTF 34041 and a grade of S in ARTF 24005. Special fee: \$66 flat fee—subject to change.

**44042 Lithography II (3)**

(Repeatable for a total of 9 credit hours) Continuation of ARTF 34042 with emphasis on individually assigned projects and printing of editions. Experiments in color lithography, plate and photolithography. Prerequisite: ARTF 34042 and a grade of S in ARTF 24005. Special fee: \$30 flat fee—subject to change.

\*Course ineligible to be repeated for GPA recalculation.  
\*\*Courses offered only at Regional Campuses.

**44055 Sculpture IV (3)**

(Repeatable for a total of 9 credit hours) Advanced sculpture course with emphasis on students pursuing individually conceived problems in close consultation with faculty. Written proposal by students required at registration. Prerequisite: ARTF 34055 and a grade of S in ARTF 24005. Special fee: \$66 flat fee—subject to change.

**44060 Painting IV (3)**

(Repeatable for a total of 9 credit hours) Advanced painting course with emphasis on students pursuing individually conceived problems in close consultation with faculty. Written proposal by students required at registration. Prerequisite: ARTF 34060 and a grade of S in ARTF 24005. Special fee: \$30 flat fee—subject to change.

**44092 Field Experience Travel Study Fine Art (1-3)**

Travel-based study/field experience in fine arts disciplines to and at a site or sites away from Kent State University. S/U graded. Prerequisite: major in fine art (ARTS).

**44095 Selected Topics: Fine Arts (1-6)**

Special problems in studio art. Discussion, lecture and studio research in various selected media and concepts. Content varies each semester offered. Prerequisite: Grade of S in ARTF 24005. Special fee: \$22/credit hour—subject to change.

**44096 Individual Study Fine Art (1)**

Additional study in area of student's choice in consultation with advisor. Prerequisite: major in fine art (ARTS) and special approval.

**44099 Senior Project: Fine Arts (3)**

Independently conceived project by senior fine art major, including written proposal and undergraduate thesis, culminating in an exhibition and review. IP grade permissible. Prerequisites: senior standing and a grade of S in ARTF 24005 and special approval. This course may be used to satisfy the writing-intensive requirement with approval of major department. Special fee: \$22/credit hour—subject to change.

**ART HISTORY (ARTH)****12001 Art Survey (3)**

An introduction to the history of art emphasizing analysis and interpretation of visual art forms. The course will also focus on the functions and meaning of Western and non-Western art traditions. No credit for art majors. Prerequisite: none. This course may be used to satisfy the Liberal Education Requirements (LER).

**22006 Art History I: Ancient and Medieval Art (3)**

Examination and interpretation of the major monuments of Western art and architecture from Paleolithic art to late Gothic art. The impact of non-Western traditions will be included as appropriate. Prerequisite: none. This course may be used to satisfy the Liberal Education Requirements (LER).

**22007 Art History II: Renaissance to Modern Art (3)**

Major movements and artists in painting, sculpture and allied arts of Europe and America from early Renaissance in Italy until the present day. The impact of non-Western traditions will be included as appropriate. Prerequisite: none. This course may be used to satisfy the Liberal Education Requirements (LER).

**22020 Art of Africa, Oceania, and the Americas (3)**

Stylistic and historical investigation of the art and architecture of the traditional societies of Africa, Oceania and the Americas within an art historical and cross-cultural perspective. Prerequisite: none. This course may be used to satisfy the Liberal Education Requirements (LER) and diversity requirement.

**32066 Late Modern Art (3)**

Painting, sculpture and allied arts in the United States and Europe from 1940 to the present. Prerequisite: ARTH 22007. Special fee: \$45 flat fee—subject to change.

**42000 Research and Writing in Art History (3)**

Introduction to the basic techniques and resources for art history research. Provides assistance in the preparation of research papers and critical essays required by upper-division art history courses. Corequisite: upper-division art history (ARTH) course. Prerequisite: junior standing or above. This course may be used to satisfy the writing-intensive requirement with approval of major department.

**42021 Arts of India and Southeast Asia (3)**

Examination of sources and styles of Indian and Southeast Asian art from prehistoric to modern. Prerequisite: sophomore, junior or senior standing.

**42022 The Arts of China (3)**

Examination of sources and styles of Chinese art from prehistoric to recent times. Prerequisite: junior or senior standing.

**42023 The Arts of Japan (3)**

Examination of sources and styles of Japanese art from prehistoric to recent times. Prerequisite: junior or senior standing.

**42025 Art of West Africa (3)**

Arts, crafts and architecture of the Western Sudanic and Guinea Coast areas of West Africa from prehistoric times to the present. Prerequisite: junior or senior standing. This course may be used to satisfy the diversity requirement. Special fee: \$45 flat fee—subject to change.

**42026 Art of Nigeria (3)**

Study of the arts, crafts and architecture of Nigeria from prehistoric times to the present. Prerequisite: junior or senior standing. This course may be used to satisfy the diversity requirement. Special fee: \$45 flat fee—subject to change.

**42027 Art of Central Africa (3)**

Comparative study of the arts, crafts and architecture of Central Africa from prehistoric times to the present. Prerequisite: junior or senior standing. This course may be used to satisfy the diversity requirement. Special fee: \$45 flat fee—subject to change.

**42031 Greek Art and Archaeology (3)**

(Cross-listed with CLAS 41401) Greek art and architecture from earliest times through Hellenistic period with special attention given to recent archaeological discoveries. Prerequisite: junior or senior standing.

**42032 Roman Art and Archaeology (3)**

(Cross-listed with CLAS 41402) Introduction to archaeology of Roman world. Emphasis on discoveries and impact on study of Italic, Etruscan and Roman art, architecture and sculpture through Imperial period. Prerequisite: junior or senior standing.

**42036 Medieval Art (3)**

Emphasis on major period of Medieval art (Byzantine, Carolingian, Ottonian, Romanesque and Gothic), treating iconographic themes and styles in a variety of media. Prerequisite: junior or senior standing.

**42039 Gothic Art, 12th to 15th Centuries (3)**

An examination of the development of European Gothic art from the 12th century to the 15th century. Emphasis on the ties to contemporary philosophical and literary developments. Prerequisites: ARTH 22006 and 20007.

**42041 Italian Renaissance Art (3)**

Study of development of major themes in Italian art from 1400 until c. 1550, emphasizing achievements of the masters and analyzing major ideas and theories of the period. Prerequisite: junior or senior standing. Special fee: \$45 flat fee—subject to change.

**42042 Northern Renaissance Art (3)**

Study of stylistic and iconographic questions and technique in Northern panel painting, as well as other arts in Northern Europe. Prerequisite: junior or senior standing.

\*Course ineligible to be repeated for GPA recalculation.  
\*\*Courses offered only at Regional Campuses.

**42043** *The High Renaissance and Mannerism in Italy (3)*

Covers late 15th- and 16th-century painting, sculpture and architecture in Italy. Following discussion of the High Renaissance masters, students examine the works collectively known as the Mannerists. Course gives students a firm grounding in the manifold artistic activity of the 16th century. Prerequisite: junior or senior standing.

**42044** *Venetian Renaissance Art (3)*

Course provides a survey of Venetian painting, sculpture and architecture from the late 1300s to the late 1500s. Upon completion, students have a comprehension of the interrelationship of Venetian art with its unique environment and society. Prerequisite: junior or senior standing.

**42046** *Baroque Art of the 17th Century (3)*

Study of the origins of Baroque art in Italy and its spread throughout Flanders, the Netherlands, France and Spain. Prerequisite: junior or senior standing. Special fee: \$45 flat fee—subject to change.

**42047** *Rococo Art in the 18th Century (3)*

Study of 18th-century art in France and subsequent spread and development throughout continental Europe. Prerequisite: junior or senior standing.

**42051** *European Art and Ideas: 1750-1900 (3)*

Selected studies in late 18th-century and 19th-century British, French, German and Spanish art and architecture within the broader context of Western culture and ideas. Prerequisite: junior or senior standing. Special fee: \$45 flat fee—subject to change.

**42056** *American Art: 1607-1860 (3)*

Intensive survey of the major forms of art, styles, personalities, patrons, institutions and aesthetic theories in the United States from its beginning to the Civil War. Prerequisite: junior or senior standing.

**42057** *American Art and Architecture: 1860-1940 (3)*

In-depth study of American painting, sculpture, graphic art, architecture and allied arts from the Civil War to 1940. Prerequisite: junior or senior standing.

**42058** *History of Photography (3)*

Investigation of photography from the 19th century to present day. Prerequisite: none.

**42061** *Early 20th-Century Art (3)*

Study of painting, sculpture, architecture and allied arts in Europe from 1880 to 1940. Prerequisite: ARTH 22007. Special fee: \$45 flat fee—subject to change.

**42062** *Picasso (3)*

Course provides a survey of the art of Picasso, starting with his childhood works. Students gain a better understanding of Picasso's pivotal importance to 20th-century art and the various influences that cultivated his incredible creativity. Prerequisite: junior or senior standing.

**42063** *American Art: European Roots (3)*

Examines the role of European roots in the formation of American art. The complex issues and identities artists faced as a result of the expatriate experience are addressed. Prerequisite: junior or senior standing.

**42067** *Art of the 1960s (3)*

A survey of major movements of the sixties decade, with primary emphasis on the United States. Prerequisite: junior or senior standing.

**42068** *Gender and Sexuality in the Arts (3)*

Examines how gender and sexuality correspond to a wide range of cultural meanings and experiences, and how artistic representations of gender and sexuality contribute to the production of subjectivity. Prerequisites: junior or senior standing.

**42070** *History of Graphic Design (3)*

Traces the arts of visual communication from their origins to current trends and practices with an emphasis on theory and aesthetics. Prerequisite: junior standing.

**42071** *History of Prints (3)*

Chronological survey of printmaking (engraving, etching, lithography, etc.) from 1400 to the present, emphasizing its technical and stylistic evolution. Prerequisite: junior or senior standing.

**42072** *Introduction to Museology (3)*

Art history course providing insights into the history of collecting, growth of museums and the scope of the museum field and specialized professional areas involved. Prerequisites: ARTH 12001 for nonart majors; ARTH 22006 and 22007 art majors.

**42075** *Film and Photography in Western Art and Ideas (3)*

Selected studies on film and photography within the broader context of Western realism and ideas. ARTH 12001, 22007 or 42051 recommended. Prerequisite: junior or senior standing.

**42078** *History of the Decorative and Applied Arts (3)*

Historical and critical examination of decorative and applied arts and their relationship to the Western societies which produced them. Prerequisites: ARTH 22006 and 22007.

**42091** *Art History Seminar (3)*

Open format course with topics announced in advance. Designed to allow detailed examination of selected topics. Prerequisites: junior standing and special approval of instructor.

**42092** *Art Museum Internship (3)*

A supervised internship in a regional art museum emphasizing the practical application of museological principles and practices. Prerequisites: junior or senior standing and ARTH 42072.

**42095** *Special Topics: Art History (1-3)*

Upper-division discussion and lecture course, whose content changes in accordance with the interest and competence of faculty. Precise title to be inserted in *Schedule of Classes*. Prerequisite: junior or senior standing.

**42096** *Individual Investigation: Art History (3)*

Directed independent study with art history faculty. IP grade permissible. Prerequisite: junior or senior standing.

**42192** *Field Experience Travel Study Art History (1-3)*

(Repeatable for a total of 8 credit hours) Travel-based study/field experience in art history to and at a site or sites away from Kent State University. The primary benefit will be the observation and study of works of art first hand, in addition to the presentation and discussion of historical and contextual factors. Time is made available for individual investigation of specific works/sites. S/U graded. Prerequisite: major in art history (ARTH) or special approval of instructor.

**ARTS AND SCIENCES (AS) Interdisciplinary Courses**

*The following courses are offered in support of nondepartmental interdisciplinary programs sponsored by the College of Arts and Sciences and constitute a portion of the curricular requirements of those programs.*

**11001** *Foundations of Modern Thought I (4)\*\**

First-semester course in which students learn eight ideas fundamental to contemporary thought through a wide variety of materials from social science, science and humanities. Offered at the Regional Campuses only. Prerequisite: none.

**11002** *Foundations of Modern Thought II (4)\*\**

The second course in which students learn eight ideas fundamental to contemporary thought through a wide variety of materials from social science, science and humanities. Offered at the Regional Campuses only. Prerequisite: AS 11001.

\*Course ineligible to be repeated for GPA recalculation.

\*\*Courses offered only at Regional Campuses.

22001 *Introduction to Jewish Studies (3)*  
Introductory examination of issues of Jewish life, culture, religion and society from antiquity to the present. Prerequisite: none.

22069 *Introduction to Lesbian, Gay, Bisexual and Transgendered Studies (3)*  
An introductory examination of lesbian, gay, bisexual and transgender issues from an interdisciplinary perspective. Prerequisite: none.

30196 *Individual Investigation (1-3)*  
(Repeated registration permissible) Registration requires prior approval from the College of Arts and Sciences office. Prerequisite: special approval.

30891 *Introductory Seminar in Comparative Literature (4)*  
A seminar presenting a variety of methods and critical approaches of comparative literature through study of selected texts and critics from several national literatures. Prerequisites: special approval.

40197 *Russian Area Studies Colloquium (3)*  
Interdisciplinary investigation of selected basic problems in 19th- and 20th-century Russia and the U.S.S.R. Prerequisites: special approval.

40897 *Colloquium in Comparative Literature (4)*  
Comparative study of major themes, types, authors or movements across historical, cultural and disciplinary boundaries. Prerequisites: special approval.

### Special Topics

*This program, administered by the dean, is intended to encourage interdisciplinary study, to cover areas not treated adequately in traditional coursework and to make available promptly the new and significant experience of the faculty.*

*Requests for the scheduling of these courses are made by faculty members or students to the sponsoring departments or to the dean. The departments concerned clear the proposed course with the Curriculum Committee of the college.*

*Because the content varies with each offering, any of these courses may be repeated for credit.*

10095 *Special Topics (1-5)\**

20095 *Special Topics (1-5)\**

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30095 *Special Topics (1-5)*

40095 *Special Topics (1-5)*

### ATHLETIC TRAINING (ATTR)

15001 *Introduction to the Profession of Athletic Training (1)*

An overview of the profession of athletic training; including employment opportunities, academic and clinical preparation; an introduction to basic knowledge and skills utilized in the profession. Prerequisite: athletic training (ATTR) major.

15011 *Introduction to Clinical Athletic Training (2)*

Basic concepts and skills related to the professional domains of the athletic training profession. ARC certification in first aid and CPR and overview of career opportunities are included. Prerequisite: athletic training (ATTR) major.

15092 *Practicum in Athletic Training I (2)\**

The study and clinical application of the Competencies in Athletic Training Educational domains. Specific emphasis on the introductory cognitive, psychomotor and affective components. Clinical hours and completion of specific competencies are required. IP grade permissible. Prerequisite: ATTR 15011 and special approval.

25036 *Principles of Athletic Training (3)*

Principles of the profession, including injury prevention, basic sports trauma, injury management and specific sports conditions. Practical competency in emergency care and first aid; athletic taping, wrapping and bracing; and equipment fitting. Prerequisite: none.

25037 *Physical Assessment Techniques (4)*

Anatomical and clinical assessment techniques for injuries and illnesses common to the physically active. Emphasis on orthopedic assessment strategies of the upper and lower quarters and spine for proper referral and care. Prerequisites: ATTR 25036 and PEP 25051.

25092 *Practicum in Athletic Training II (2)\**

The study and clinical application of the Competencies in Athletic Training Educational domains. Specific emphasis on the intermediate cognitive, psychomotor and affective components. Clinical hours and completion of specific competencies are required. IP grade permissible. Prerequisite: ATTR 15092.

26001 *Introduction to Community Inclusion of Individuals with Disabilities (3)*

Interdisciplinary exploration of conceptual, theoretical, philosophical and legal aspects related to inclusion of individuals with disabilities in community life. Prerequisite: none.

35025 *Essentials of Athletic Injury Management (1)*

Common injuries related to physical activity and/or athletic participation from the cause, management and care perspectives. American Red Cross sport safety training certification (including adult/child CPR) will be granted. Emphasis on application of skills. Prerequisite: none.

35037 *Advanced Physical Assessment Techniques (3)*

Anatomical, medical and clinical assessment techniques for injuries and illnesses common to the physically active. Emphasis on neurological and nonorthopedic assessment strategies for proper referral and care. Prerequisite: ATTR 25037.

35039 *Therapeutic Modalities (3)*

The study and practical application of physical modalities including physical principles, physiologic effects, indications/contraindications and standard application procedures. Safety and legal issues of modality usage also addressed. Prerequisite: ATTR 25036.

35092 *Practicum in Athletic Training III (2)*

The study and clinical application of the Competencies in Athletic Training Educational domains. Specific emphasis on the intermediate and advanced cognitive, psychomotor and affective components. Clinical hours and completion of specific competencies are required. IP grade permissible. Prerequisites: ATTR 25092.

45017 *Professional Development in Athletic Training (3)*

An investigation of the issues affecting the student athletic trainer as they prepare for an entry-level career in athletic training. Professional development issues and NATABOC exam preparation are included. Prerequisites: senior standing and athletic training (ATTR) majors only.

45038 *Organization and Administration of Athletic Training (3)*

Investigation into current philosophies and legal aspects of athletic training. Organization and administration of all aspects of athletic training programs. Prerequisite: ATTR 25036.

\*Course ineligible to be repeated for GPA recalculation.  
\*\*Courses offered only at Regional Campuses.

**45039 Therapeutic Rehabilitation (4)**

The study and clinical application of rehabilitation techniques including strategies for proper exercise selection based on anatomical and physiological considerations, program administration and guidelines for program progression. Prerequisites: ATTR 25036 and PEP 25051.

**45040 Pathology and Pharmacology for Allied Health Care Providers (3)**

Investigation of specific pathological conditions presented by professionals including physicians and pharmacists. Will discuss common pathologies, associated pharmacological treatment and physiologic effects for various afflictions. Prerequisites: senior standing and special approval.

**45192 Practicum in Athletic Training IV (3)**

The study and clinical application of competencies in athletic training educational domains. Specific emphasis on the advanced cognitive, psychomotor and affective components. Clinical hours and completion of specific competencies and proficiencies are required. Prerequisite: ATTR 35092.

**45292 Internship in Athletic Training (4)**

(Repeatable once for a total of 8 hours) Internship in approved athletic training setting under the direct supervision of a certified athletic trainer. Sixty clock hours required for each credit hour. IP grade permissible. Prerequisites: ATTR 15092 and 25092 and 35092 and 45192 and special approval.

**AVIATION MAINTENANCE TECHNOLOGY (AMRT)\*\***

**10010 FAA Regulations and Documentation (2)**  
FAA history, inspections, documentation and aircraft drawings. Comprehensive course for the AMRT candidate to meet the requirements for FAA certification. Corequisite: AMRT 10040.

**10020 Aircraft Tools and Techniques (2)**

Welding for the aviation maintenance technician and understanding of fluid lines and fittings. Comprehensive course for the AMRT candidate to meet the requirements for FAA certification. Corequisite: AMRT 10010.

**10030 Airframe I (3)**

Understanding aircraft systems and corrosion control. Comprehensive course for the AMRT candidate to meet the requirements for FAA certification. Prerequisite: AMRT 10010.

**10040 Aviation Power Plant I (4)**

Study of aviation engines and propellers. Comprehensive course for the AMRT candidate to meet the requirements for FAA certification. Corequisite: AMRT 10010.

**20010 Airframe II (3)**

Understanding aircraft structures. Comprehensive course for the AMRT candidate to meet the requirements for FAA certification. Prerequisite: AMRT 10030.

**20020 Airframe III (2)**

Advanced airframe course. Comprehensive course for the AMRT candidate to meet the requirements for FAA certification. Prerequisite: AMRT 20010.

**20030 Aviation Electronics (3)**

Electronics and systems for the aviation maintenance technician. Comprehensive course for the AMRT candidate to meet the requirements for FAA certification. Prerequisite: EERT 12001.

**20040 Principles of Flight (3)**

Nature of light, sound and aerodynamics. Comprehensive course for the AMRT candidate to meet the requirements for FAA certification. Prerequisite: PHY 12202.

**20050 Practicum in Advanced Aviation (2)**

Aviation maintenance experience. Comprehensive course for the AMRT candidate to meet the requirements for FAA certification. Prerequisite: AMRT 10040.

**20060 Aviation Power Plant II (2)**

Further studies into aircraft engines. Comprehensive course for the AMRT candidate to meet the requirements for FAA certification. Prerequisite: AMRT 10040.

**BIOLOGICAL SCIENCES (BSCI)**

*NOTE: Students planning on majoring or minoring in the biological sciences in the College of Arts and Sciences or the College of Education, Health and Human Services must enroll in BSCI 10110 and 10120. Non-majors should enroll in BSCI 10001 and 10002 series OR in courses specifically designated in the students' program of study.*

*Some biological science courses (i.e. 10001, 10002, 20001, 20020, 20021, 20022, 30030, 30050 and 40020) are not accepted for credit in any biological sciences major or minor. Credit toward any biological sciences major or minor will not be permitted for a mixture of courses from the major series (10110 and 10120) and the nonmajor series (10001, 10002, 20001, 20002, 20020 and 20021).*

*Biological sciences courses with a third digit of zero (i.e. 30000, 30030, 30050 and 40020) are not accepted for ELECTIVE credit only in a biological sciences major or minor except by permission of the Biological Sciences*

*advisor and the undergraduate coordinator. A total of not more than 6 hours of any combination of BSCI 40099, 40191, 40192, 40193 or 40196 may be used toward fulfillment of the elective options and of these no more than 4 hours may be S/U graded.*

**10001 Human Biology (3)**

Study of the scientific method and life's properties, emphasizing human biology. Topics include energy, genetics, reproduction, development, disease, nutrition and physical fitness in humans. Prerequisite: none. This course may be used to satisfy the Liberal Education Requirements (LER).

**10002 Ecology, Evolution and Society (3)**

The major ecological and evolutionary forces that determine the life history characteristics of plants and animals including humans. Three one-hour lecture/demonstrations per week. Prerequisite: none. This course may be used to satisfy the Liberal Education Requirements (LER).

**10010 Lake Erie Environmental Science (3)\*\***

Principles and concepts of aquatic sciences and their relationship and application to marine business ventures in the Great Lakes region. Prerequisite: none.

**10100 Anatomy for Veterinary Technicians (5)\*\***

Compare/identify anatomy and basic physiological functions of domestic animals: skeletal, muscles, integumentary, special sense organs, respiratory, digestive, urinary, reproductive, mammary glands, endocrine, nerves, circulatory, immune. Four-hour lecture and three-hour lab weekly. Prerequisite: none.

**10110 Biological Diversity (4)**

Considered first course in biology majors' sequence. Examines the biodiversity of life from its origins to present-day microbes, plants and animals; their behavior, ecology and reproduction. Field trips. Prerequisite: none.

**10120 Biological Foundations (4)**

Considered second course in biology majors' sequence. Examines organization of life from sub-cellular biochemistry and molecular biology to genetics, bioenergetics and system homeostasis. Three-hour lecture and three-hour lab weekly. Field trips. Prerequisite: none. Special fee: \$8 flat fee—subject to change.

**11000 Principles of Anatomy for Radiologic Technology (4)\*\***

Introductory human anatomy for radiologic technology students emphasizing the concepts of both functional and regional anatomy to clinical practices

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\*\*Courses offered only at Regional Campuses.

and procedures. Three-hour lecture and two-hour lab weekly. Offered only on the Salem Campus. Corequisite: RADT 14020. Prerequisite: admission to the radiologic technology (RADT) program.

**11001 Anatomy for Physical and Occupational Therapy (5)\*\***

This course covers the organization of the human body with emphasis on the structure and function of the neuro-musculo-skeletal systems. Prerequisite: none.

**11010 Anatomy and Physiology I for Allied Health (3)**

Anatomy and physiology to include organization of the human body, cells, tissues, organs and systems, integumentary, skeletal, muscular and respiratory systems and overview of the nervous and circulatory system. Prerequisite: special approval.

**11020 Anatomy and Physiology II for Allied Health (3)**

Anatomy and physiology of the circulatory, digestive, urinary, nervous, endocrine and reproductive systems. Prerequisite: BSCI 11010 and special approval.

**16001 Horticultural Botany (3)\*\***

To provide students with an understanding of the basic anatomy and physiology and growth characteristics of plants. Two-hour lecture and three-hour lab weekly; offered only at the Geauga and Salem campuses. Prerequisite: none.

**20001 Zoological Foundations of Medicine (4)**

General zoology, including elements of human and mammalian physiology, anatomy and histology. Two-hour lecture and four-hour lab weekly. Prerequisite: special approval (required of first-year students in Phase I of NEUCOM's combined B.S./M.D. program).

**20020 Biological Structure and Function (5)**

Basic design of human systems emphasizing the physiochemical and cellular bases of organ-system structure, function and development. Four-hour lecture and three-hour lab weekly. Prerequisite: none. Special fee: \$10 flat fee—subject to change. This course may be used to satisfy the Liberal Education Requirements (LER).

**20021 Basic Microbiology (3)**

Principles of microorganisms having a direct relationship on the health and well-being of man. Prerequisites: BSCI 20020; or BSCI 10100 and 10110.

**20022 Basic Microbiology Laboratory (1)**

Lab experience in microbiology. Three-hours of lab per week. Cannot be used to satisfy degree requirements for biology majors. Corequisite: BSCI 20021. Special fee: \$12 flat fee—subject to change.

**20140 Cell Biology (4)**

Investigation of the cell as the fundamental unit of life with an emphasis on the relationship between cellular structure and function. Prerequisites: BSCI 10110 and 10120 and CHEM 10060 and 10061 and 10062 and 10063. Special fee: \$28 flat fee—subject to change.

**20196 Introduction to Individual Investigation (1-2)\***

Introduction to research in the biological sciences under the direction of a BSCI faculty mentor. S/U grading; IP grade permissible. Prerequisite: 8 credit hours of BSCI courses with a minimum grade of C (2.0) in those courses. Departmental and faculty mentor approvals required.

**20275 Local Flora (4)**

Identification and field study of local plants: native, naturalized and cultivated. Two-hour lecture and six-hour lab weekly. Prerequisites: BSCI 10110 and 10120. Special fee: \$40 flat fee—subject to change.

**20560 Invertebrate Zoology (4)**

Survey of the animal kingdom emphasizing evolutionary developments. Three-hour lecture and three-hour lab weekly. Prerequisites: BSCI 10110 and 10120.

**26002 Ecological Principles of Pest Management (3)\*\***

Basic principles of integrated pest management, pesticide application, pest identification and environmental effects. Offered only at the Geauga and Salem campuses. Prerequisites: CHEM 16001.

**26003 Plant Identification and Selection I (3)\*\***

Identification and selection of horticulturally important plant species. Emphasis on woody species, shrubs and trees. Two-hour lecture and three-hour lab weekly. Offered only at the Geauga and Salem campuses. Prerequisites: HORT 16001 and BSCI 16001.

**26004 Plant Identification and Selection II (3)\*\***

Identification and selection of horticulturally important plant species. Emphasis on herbaceous species, ground covers and vines. Two-hour lecture and three-hour lab weekly. Offered only at the Geauga and Salem campuses. Prerequisites: BSCI 16001 and HORT 16001.

**30030 Human Physiology (4)**

Integrating mechanisms, pharmacological and pathological considerations for selected organ systems. Prerequisites: BSCI 20020; or 10110 and 10120; and 9 credit hours of chemistry (CHEM) courses.

**30050 Human Genetics (3)**

Modern concepts of genetics applicable to the human, including examination of genetically related diseases and their societal implications. Prerequisites: 8 credit hours of biology and 5 credit hours of chemistry.

**30156 Elements of Genetics (3)**

Principles of organic mechanisms for expression and transmission of traits as studied in molecules, cells, organisms and populations. Prerequisites: BSCI 10110 and 10120.

**30171 General Microbiology (4)**

Fundamental principles of microbiology and of organisms including their structure, physiology, genetics, pathogenicity, classification, mechanisms of cultivation and control. Three-hour lecture and three-hour lab weekly. Prerequisites: BSCI 20140 and CHEM 10060 and 10061 and 10062 and 10063. Special fee: \$28 flat fee—subject to change.

**30267 Plant Physiology (4)**

Survey of physiological and biochemical processes, their interactions and effect on plant growth and behavior. Three-hour lecture and three-hour lab weekly. Prerequisites: BSCI 20140 and CHEM 10060 and 10061 and 10062 and 10063.

**30274 Forestry (2)**

Management of the forest resource within appropriate environmental constraints for sustained use relative to watershed protection, lumber production, recreation and wildlife. One-hour lecture and three-hour lab weekly. Prerequisites: BSCI 10110 and 10120.

**30277 Economic Botany (2)**

Biology of plants important to man and their relation to climate and geography. Two-hour lecture weekly. Prerequisites: BSCI 10110 and 10120.

**30360 General Ecology (4)**

Principles of ecology based on field studies of local plant and animal communities. Three-hour lecture and three-hour lab weekly. Prerequisites: BSCI 10110 and 10120 and MATH 11011 and junior or senior standing.

**30361 Biogeography (3)**

Geographical distribution of biotic communities with special reference to North America and to their environmental control. Three-hour lecture weekly. Prerequisites: BSCI 10110 and 10120.

**30518 Vertebrate Anatomy (4)**

Concepts and methods of functional morphology. Comparative study of vertebrate organs and systems: skeletal, muscular, digestive, respiratory, circulatory, urogenital, nervous and endocrine. Three-hour lecture and three-hour lab weekly. Prerequisite: BSCI 10110 or 10120. Special fee: \$32 flat fee—subject to change.

**30519 Vertebrate Embryology and Developmental Anatomy (4)**

Gametogenesis, fertilization, embryogenesis, organogenesis, normal/abnormal embryological development; emphasizing mammal; amphibian, bird illustrating general principles and concepts. Lab studies of frog, chick, pig developmental anatomy. Three one-hour lectures and one three-hour lab. Prerequisites: BSCI 20001 or 30518; and 20140.

**30580 Entomology (4)**

Classification, biology and ecology of the principal groups of insects. Three-hour lecture and three-hour lab weekly. Prerequisites: BSCI 10110 and 10120 and 10 credit hours of biology (BSCI) courses.

**30582 Ornithology (4)**

Field study of natural history of local birds. Three-hour lecture and three-hour lab weekly. Prerequisites: BSCI 10110 and 10120. Special fee: \$40 flat fee—subject to change.

**40020 Biology of Aging (3)**

Aging in cells, plants and animals, including man; maintaining human health during aging; current theories of aging. Three-hour lecture weekly. Prerequisites: BSCI 20020 and CHEM 10050 and 10052.

**40099 Senior Honors Thesis (1-10)**

Honors thesis research project completed during the senior year with BSCI faculty mentor and research committee. Maximum of 4 credit hours to count toward BSCI degrees as upper-division elective hours. IP grade permissible. Prerequisite: departmental, faculty mentor and Honors College approval.

**40142 Bioenergetics (3)**

Lecture and discussion of respiration and photosynthesis, their origin, development and control in living systems. Concepts are introduced from fundamental principles. Three-hour lecture weekly. Prerequisites: BSCI 20140; and CHEM 20481 or 30481.

**40143 Eukaryotic Cell Biology (3)**

Current survey of the structure and function of eukaryotic cells, including recent advances in research technology. Three-hour lecture weekly. Prerequisites: BSCI 20140; and CHEM 20481 or 30481.

**40158 Molecular Biology (3)**

Molecular genetics, DNA and RNA structure, chromosomes, DNA replication, recombination, genetic transcription and translation, gene expression, current concepts and technologies. Prerequisites: BSCI 20140 and 30156.

**40159 Molecular Biology Lab (2)**

Experience in research methods for studying cellular and molecular processes in plant and animal systems. Lab meets six hours weekly. Prerequisites: BSCI 20140; and BSCI 40143 or 40158; and CHEM 20481 or 30481; and CHEM 30475. Special fee: \$50 flat fee—subject to change.

**40160 Marine Biology (3)**

Natural history and ecology of marine organisms, with emphasis on life in coastal habitats. Lecture three hours. Prerequisite: BSCI 20560.

**40163 Organic Evolution (3)**

History of evolutionary theory, the evidences of evolution, the evolutionary forces and the products of these forces. Three-hour lecture weekly. Prerequisites: BSCI 30156 and 4 hours of biology (BSCI) courses.

**40164 Molecular Systematics and Phylogenetics (4)**

Modern methods used in systematics, DNA sequencing, DNA fingerprinting, phylogenetic analysis and interpretation of character evolution. Three-hour lecture and three-hour lab weekly. Prerequisite: BSCI 40163.

**40165 History of Biology (2)**

Historical development of biology from antiquity to the present. Lecture two hours weekly. Prerequisites: BSCI 10110 and 10120.

**40170 Stream Biology (3)**

Identification, biology and ecology of stream-inhabiting organisms. Two-hour lecture, three-hour laboratory weekly. Prerequisites: BSCI 10110 and 10120.

**40174 Immunology (3)**

Survey of the mammalian host responses to self and nonself with emphasis on the cellular and molecular mechanisms by which innate and acquired immunity result. Experimental design and data analyses are related to current methodologies used to study immunology. Lectures three hours weekly. Prerequisites: BSCI 30171 and CHEM 10060 and 10061 and 10062 and 10063.

**40191 Senior Seminar (1)**

A capstone seminar course to examine biological topics and scientific contributions across subdisciplines. Discussion of current problems in the biological sciences related to societal needs and concerns. Prerequisites: BSCI 10110 and 10120 and 20140 and 30156 and 30360 and 40163.

**40192 Internship in Biological Sciences (3-12)**

Work experience and training in the biological sciences under the supervision of appropriate personnel in a government agency, nonprofit organization, or business. Maximum of 4 credit hours to count toward BSCI degrees as upper-division elective hours. Prerequisites: 18 hours of biology (BSCI) and 2.75 minimum GPA in biology coursework and special approval.

**40193 Variable Title Workshop in Biological Sciences (1-6)**

Topics to be offered will meet specific needs in the biological sciences. S/U graded. Prerequisite: special approval.

**40195 Special Topics in Biology (1-3)**

IP grade permissible. Prerequisites: 18 hours of biology (BSCI) coursework and special approval of instructor.

**40196 Individual Investigation (1-3)**

Research study under the direction of a BSCI faculty mentor. May be repeated; however a maximum of 4 credit hours counts toward BSCI degrees as upper-division elective hours. Prerequisites: a minimum BSCI grade average of 2.75 and at least 18 credit hours of BSCI coursework. Departmental and faculty mentor approvals required.

**40269 Biology of the Algae (4)**

Morphology, ecology and systematics of freshwater and marine algae. Three-hour lecture and three-hour lab weekly. Prerequisites: BSCI 10110 and 10120 and 10 credit hours biology (BSCI) coursework. Special fee: \$28 flat fee—subject to change.

**40272 Plant Anatomy (4)**

Development and structure of cells, tissues and tissue systems of seed plants. Both vegetative and reproductive structures of angiosperms will be emphasized. Two-hour lecture and six-hour lab weekly. Prerequisites: BSCI 10110 and 10120.

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**40275 Systematic Botany (4)**

Biosystematics, angiosperm phylogeny, survey of some major families of dicotyledons. Three-hour lecture and three-hour lab weekly. Prerequisites: BSCI 10110 and 10120.

**40277 Morphology of Lower Plants (4)**

Nonvascular plants, emphasizing structure, reproduction, evolution, fossil history, economic, ecological and medical importance. Three-hour lecture and three-hour lab weekly. Prerequisites: BSCI 10110 and 10120.

**40363 Microbial Ecology (3)**

Microbial interactions with their biotic and abiotic environment; control of distribution and physiological activities; biochemical cycles; current techniques; emphasis on bacteria in aquatic systems. Pre/corequisites: BSCI 30171 and 30360.

**40364 Limnology (4)**

Field and lab study of the principles of aquatic ecology. Recitation one hour, lecture two hours, lab three hours weekly. Prerequisite: BSCI 30360. Special fee: \$40 flat fee—subject to change.

**40367 Limnological Techniques (2)**

Analysis and significance of ecologically important variables and constituents of surface waters. Lecture one hour, lab four hours weekly. Prerequisite: BSCI 40364.

**40368 Wetland Ecology and Management (4)**

Lecture, lab and field study of the principles of wetland ecology including adaptations of the biota to environmental conditions, comparison among different wetland habitat types and habitat management. Three-hour lecture and three-hour lab weekly. Prerequisites: BSCI 10110 and 10120 and 10 hours of biology (BSCI) coursework. Special fee: \$40 flat fee—subject to change.

**40369 Lake Management (3)**

Lecture/discussion related to management of lakes and reservoirs, emphasizing eutrophication problems. Current literature and problem-solving techniques emphasized. Prerequisite: BSCI 40364.

**40372 Populations, Communities and Ecosystems (4)**

Integrated investigation of population, community and ecosystem ecology from historical and current perspectives. Community and ecosystem views of nutrient dynamics and biodiversity provide a framework for consideration of food web patterns, energy flow and ecosystem stability and function. Prerequisites: BSCI 30360 and 40163.

**40374 Conservation Biology (4)**

Provides a critical analysis of the factors that threaten biological diversity in the biosphere and the consequences on biological processes and quality of life. Prerequisite: BSCI 30360.

**40430 General Physiology (4)**

Physiologic principles and concepts. Three-hour lecture and three-hour lab weekly. Prerequisites: BSCI 20140 and CHEM 10060 and 10061 and 10062 and 10063. Special fee: \$8 flat fee—subject to change.

**40432 Endocrinology (3)**

Principles of endocrine regulation of physiological and metabolic processes. Morphological and functional interrelationships between systems. Prerequisite: BSCI 40430.

**40433 Mammalian Physiology I (3)**

The internal environment, metabolism and energy balance, temperature regulation, nervous system and special senses. Corequisite: BSCI 40444. Prerequisites: BSCI 40430 and 9 credit hours mathematics (MATH) coursework or 20 credit hours chemistry (CHEM) coursework.

**40434 Mammalian Physiology II (3)**

Physiology of cardiovascular, renal, respiratory and digestive systems. Corequisite: BSCI 40445. Prerequisites: BSCI 40430 and 9 credit hours mathematics (MATH) coursework or 20 credit hours chemistry (CHEM) coursework.

**40435 Reproductive Physiology of Mammals (3)**

Current concepts of reproductive processes based on studies with lab and domestic animals and man. Prerequisites: BSCI 40430 and 40432.

**40439 Environmental Physiology (4)**

Effects of heat, cold, oxygen, carbon dioxide, pressure, radiant energy, salt and water variations and other environmental factors on organisms. Prerequisites: BSCI 10110 and 10120 and CHEM 10060 and 10061 and 10062 and 10063.

**40444 Mammalian Physiology Laboratory I (1)**

Lab experimentation emphasizing physiological principles covered in BSCI 40433. Corequisite: BSCI 40433. Special fee: \$40 flat fee—subject to change.

**40445 Mammalian Physiology Laboratory II (1)**

Lab experimentation emphasizing physiological principles covered in BSCI 40434. Four-hour lab weekly. Corequisite: BSCI 40434. Special fee: \$40 flat fee—subject to change.

**40515 Animal Behavior (3)**

Study of patterns of animal behavior and the ecological and physiological mechanisms which regulate their form and occurrence. Prerequisites: BSCI 20560 or 40556.

**40517 Histology (3)**

Study of the microscopic and submicroscopic structure of the mammalian body in relation to function. Two-hour lecture and three-hour lab weekly. Prerequisites: BSCI 10110 and 10120 and 20140 and 4 credit hours of biology (BSCI) coursework.

**40525 Wildlife Resources (3)**

Ecological parameters are discussed relative to the preservation and management of wild animal populations. Aesthetic, economic and environmental values are discussed. Prerequisites: BSCI 10110 and 10120 and 4 credit hours biology (BSCI) coursework.

**40556 Vertebrate Zoology (4)**

Field approach to identification and natural history of all Ohio vertebrates except birds. Three-hour lab and three hours field weekly. Prerequisites: BSCI 10110 and 10120 and 4 credit hours biology (BSCI) coursework.

**40581 Animal Parasitology (4)**

Morphology, physiology, life-histories, systematics and economic importance of parasites. Lecture two hours, lab six hours weekly. Prerequisites: BSCI 10110 and 10120 and 4 credit hours biology (BSCI) coursework.

**40600 Writing in the Biological Sciences (1)**

Writing-intensive course taken with a 3- or 4-credit-hour upper-division biology course. Prerequisites: BSCI 10110 and 10120 and 20140 and junior standing. This course may be used to satisfy the writing-intensive requirement with approval of major department.

**BIOTECHNOLOGY (BTEC)****10210 Introduction to Biotechnology (3)**

Basic principles and applications of modern biotechnology, including recombinant DNA technology, microbial technology, fermentation, genetic engineering, plant and animal tissue culture and medical biotechnology. Three-hour lecture weekly. Prerequisite: BSCI 10120.

**40191 Seminar: Recent Developments in Biotechnology (1)**

Recent developments in biotechnology explored through the presentation and discussion of research articles and reviews in the biotechnology literature. Prerequisites: BTEC 10210 and BSCI 20140 and 30171 and 30156 and CHEM 30284.

**40192 Internship in Biotechnology (2-9)**  
Work experience in a biotechnology lab. Registration requires approval of program director and is dependent on availability of internship sites. Written report of activities required. S/U grading, IP grade permissible. Prerequisite: biotechnology (BTEC) major.

**40196 Individual Investigation in Biotechnology (2-9)**  
Research experience in biotechnology. Registration requires approval of program director and research director. Written report required. S/U grading, IP grade permissible. Prerequisite: biotechnology (BTEC) major.

**40210 Case Studies in Biotechnology (3)**  
Case studies used to explore biotechnology practice and the application of various technologies in industry and medicine. Emphasis placed on developing problem solving, information gathering, inductive reasoning and technical communication skills. Prerequisites: BTEC 10210 and BSCI 20140 and 30171 and 30156 and 40158 and CHEM 30284 and 40248.

**40220 Bioinformatics (2)**  
Analysis of biological databases including nucleic acid and protein sequence searching, multiple sequence alignments, protein classification, phylogenetic analysis, comparative genomics, proteomics, protein structure analysis. Prerequisites: BSCI 20140 and 30171 and 30156 and 40158 and CHEM 30284 and 40248.

### BUSINESS ADMINISTRATION INTERDISCIPLINARY (BUS)

**10123 Exploring Business (3)**  
An introduction to the basic areas of business with an integrated perspective on how the various areas work together. Technological competencies and communicative skills will be developed. Team building opportunities will be announced. Prerequisite: none.

**10195 Special Topics (1-3)\***  
Special topics course that is offered on a semester basis with different topics and different faculty. IP permissible. Prerequisite: special approval.

**20192 Internship in Business (1-3)\***  
Preparation of research report concurrent with on-the-job experience with cooperating business or other organization. Prerequisite: special approval.

**20195 Special Topics (1-3)\***  
Special topics course that is offered on a semester basis with different topics and different faculty. IP permissible. Prerequisite: special approval.

\*Course ineligible to be repeated for GPA recalculation.  
\*\*Courses offered only at Regional Campuses.

**20293 Variable Title Workshop in Business (1-3)\***  
Variable topics. Prerequisite: none.

**30195 Special Topics (1-3)**  
Special topics course that is offered on a semester basis with different topics and different faculty. IP permissible. Prerequisite: special approval.

**30234 International Business (3)**  
Learn how international business is affected by the forces of globalization: opportunities, threats and challenges that ensue from hypercompetition, and the institutional checks and balances necessary to prevent complexity deteriorating into chaos. Prerequisites: ACCT 23020 and ECON 22060 and 22061 and FIN 36053 and MKTG 25010.

**40192 Internship in Business (1-3)**  
Preparation of research report concurrent with on-the-job experience with cooperating business or other organization. Prerequisite: special approval.

**40195 Special Topics (1-3)**  
Special topics course that is offered on a semester basis with different topics and different faculty. IP permissible. Prerequisite: special approval.

### BUSINESS MANAGEMENT AND RELATED TECHNOLOGIES (BMRT)\*\*

**11000 Introduction to Business (3)**  
Overview of social, economic and consumer environments as related to large and small business. Emphasis is on production, marketing, finance, management and human resources. Prerequisites: US 10006 or Compass reading score minimum 86; and ENG 11001 or Compass writing score minimum 67.

**11006 Business Computations I (3)**  
Application of algebraic and arithmetic concepts to accounting, finance and marketing. Computation of finance charges, taxes, fundamentals of inventory control and depreciation. Prerequisite: none.

**11009 Introduction to Management Technology (3)**  
Study of planning, organizing, directing/leadership, controlling, staffing, decision making and communication theories, and management applications of human and material resources and methods. Prerequisite: BMRT 11000 or special approval of full-time BMRT faculty.

**21000 Business Law and Ethics I (3)**  
Introduction to American law as related to government, business, society and the ethical issues that occur in the legal environment. Emphasis will focus on contract law. Relevant past and current law issues will be addressed. Prerequisite: none.

**21002 Business Law and Ethics II (3)**  
This course is a continuation of Business Law and Ethics I. Topics include commercial paper, insurance, real property, partnerships and corporations, security devices and bankruptcy. Prerequisite: BMRT 21000.

**21004 Introduction to Business Statistics (3)**  
Basic decision-making statistics for business management. Emphasis is on probability theory, statistical inferences and decision making under uncertainty. Prerequisite: MATH 11011.

**21005 Purchasing and Supply Management (3)**  
Practical approach to the material acquisition, management and supply chain function in the American business system. Prerequisite: BMRT 11000 or special approval of full-time BMRT faculty.

**21006 Human Resources Management (3)**  
The study of contemporary issues of human resources. Covers planning, job design, selection, appraisal, compensation, training, life quality, safety/ health, diversity and unions. Prerequisite: BMRT 11009 or special approval of BMRT faculty.

**21008 Case Studies in Management Technology (3)**  
Application of management theory to actual business situations. Emphasis on decision making and evaluation of methods and styles of management in all functional areas. Prerequisite: special approval of BMRT faculty only.

**21009 Seminar in Management Technology (3)**  
Last-semester students of business management technology engage in critical reading, writing and discussion to apply business theory to on-the-job experiences. Prerequisite: BMRT 21008 or special approval of full-time BMRT faculty.

**21011 Fundamentals of Financial Management (3)**  
Understanding basic financial reports for analysis and performance of a business. Preparation of sales forecasts to develop capital and expense budgets. Prerequisites: ACTT 11000 and COMT 11000, or special approval of BMRT faculty.

**21020 Introduction to Entrepreneurship (3)**  
Provides information about the functional elements of starting a small business. Includes the use of instruments, exercises and case analyses to assess entrepreneurial skills. IP grade permissible. Prerequisite: none.

**21023 Financing the Business Venture (3)**

Course deals with determining capital needs, identifying sources of capital, developing a financial plan and interpreting financial statements. Both public and private loan programs will be reviewed. Prerequisite: BMRT 21020 or special approval of full-time BMRT faculty.

**21050 Fundamentals of Marketing Technology (3)**

Study of the basic concepts and principles involved in marketing a product/service with an emphasis on the marketing mix variables: product, price, place and promotion. Prerequisite: BMRT 11000 and ECON 22060.

**21051 Fundamentals of Retailing (3)**

A survey of retailing that emphasizes skills necessary for store organization, location, layout, pricing, merchandising and inventory control. New retail concepts are stressed. Prerequisite: BMRT 11000 or special approval of BMRT faculty.

**21052 Professional Selling Techniques (3)**

Study of personal selling as a promotional technique to determine and satisfy the needs of buyers and to build a long-term relationship among all parties. Prerequisite: BMRT 11000 or special approval of full-time BMRT faculty.

**21053 Advertising in Business (3)**

A practical approach to the study of advertising. Emphasis is on the effective use of the media, creating advertising operations and advertising management. Prerequisite: BMRT 21050 or special approval of BMRT faculty.

**21054 Insurance Principles (2)**

Introduction to the types of insurance, risk management and ethics of insurance. Other topics to be addressed are contract law and retirement planning. Prerequisite: BMRT 11000 or special approval of BMRT faculty.

**21055 Retail Merchandising (3)**

Principles and procedures of retail merchandising. Problem solving for merchandising and utilization of mathematical models. Procedures for planning and control of merchandise. Prerequisite: BMRT 21051 or special approval of BMRT faculty.

**21056 Principles of Visual Display (3)**

Basic principles of visual display. Introduction to basic equipment used in display work. Window and interior displays in department and specialty stores. Prerequisite: BMRT 21051 or special approval of BMRT faculty.

**21092 Internship in Management Technology (1-3)\***

Students participate in a supervised educational experience. Each credit hour requires a minimum of seven hours work without pay or 10 hours work with pay per week for 15 weeks. IP grade permissible. Prerequisite: special approval of full-time BMRT faculty.

**21095 Special Topics (1-3)\***

(Repeated registration permissible) Special topics in business technology announced when scheduled. Prerequisite: special approval of full-time BMRT faculty.

**21096 Individual Investigation in Business Technology (1-3)\***

Individual study in business and related fields. Open to business technology students only. IP grade permissible. Prerequisite: special approval of full-time BMRT faculty.

**CAREER TECHNICAL TEACHER EDUCATION (CTTE)****36014 Evaluation Practices in Career Technical Education (3)**

Study and construction of evaluation devices for use in lab and related technology courses, test construction, standardized and nonstandardized test procedures. This course includes 10 field/clinical hours. Prerequisite: none.

**36020 Occupational Experience: Technology (12)**

Written examination covering technology of a specific occupation. Prerequisite: department special approval.

**36021 Occupational Experience: Manipulative (12)**

Manipulative examination covering competencies and techniques of an occupation. Prerequisite: department special approval.

**40093 Variable Topic Workshop in Career Technical Education (1-5)**

Topics of special interest to students desiring to intensify their knowledge in a particular area of career technical education. S/U grading. Prerequisite: department special approval.

**44618 Elements of Experience-Based Education (3)**

Examination of various aspects of experience-based education includes exploratory, observation, lab and paid work experiences. Prerequisite: none.

**45372 Issues in Career Technical Education Subjects (3)**

Exploration of issues and trends unique to specific career technical education subjects. Prerequisite: none.

**45377 Career and Technical Education: Advanced Methodologies (3)**

Selection, organization and presentation of subject matter pertaining to specific subjects in career and technical education. Emphasis on methods and techniques through theory and practice. Course includes 30 field/clinical hours. Prerequisite: none.

**46001 Organization of Career and Technical Education (3)**

Study of the principles and subject areas related to career and technical education at middle school, secondary and adult education levels. Prerequisite: none. This course may be used to satisfy the writing-intensive requirement with approval of major department.

**46002 In-Service Teaching I (2)**

Overview of teaching process in career technical teacher education. Emphasizes techniques of skill development and assessment; includes organizing for instruction, individual behavior, organizational relationships and application steps. Prerequisite: none.

**46003 In-Service Teaching II (1)**

Continuation of CTTE 46002. Involves professional development, licensure preparation for career technical instructors and organized class instruction. Prerequisite: none.

**46015 Methods of Career and Technical Education (3)**

Organization and management of classroom and lab; includes purchasing equipment and supplies, safety instruction planning, establishing policies, maintaining records, and individual and group instructional strategies. Prerequisite: none.

**46017 Youth Organizations in Career Technical Education (3)**

Study of youth organizations in career technical education with emphasis on the organization and purposes and advisor role. Prerequisite: none.

**46018 Disadvantaged Youth in Career Technical Education (3)**

Developing an understanding of disadvantaged youth stressing their characteristics as they pertain to career technical education programs. Prerequisite: none.

**46019 Coordination of Career Technical Cooperative Education Programs (3)**

Reviews duties, problems, techniques of home, school and work coordination. Internship site selection, job development, servicing the job station, coordinating classroom and work experience. A study of important linkage to local business/industry and education support agencies for career and technical development. Prerequisite: none.

\*Course ineligible to be repeated for GPA recalculation.  
\*\*Courses offered only at Regional Campuses.

**46020 Curriculum Guide: Design and Application (3)**

Methods and techniques involved in developing and utilizing a curriculum guide in career and technical education subjects. This course includes 15 field/clinical hours. Prerequisite: none.

**46029 Training and Development (3)**

An overview of training and development activities in profit and nonprofit organizations. Principles of teaching adults in the workplace are supplemented with curriculum design and instructional methodologies. Prerequisite: none.

**46031 Student Teaching in Career Technical Education (9)**

Provides a 12 week student teaching experience in a career-technical program setting. See Student Teaching section in this *Catalog*. S/U grading; IP grade permissible. Prerequisite: Eligible for admission to student teaching and admission to advanced study and career and technical teacher education (CTTE) major. Corequisite: CTTE 49525.

**46092 Internship, Practicum and Field Experience in Career Technical Education (2-5)**

Supervised internship, practicum or field experience in specific occupations. Prerequisite: special approval.

**46095 Special Topics in Career Technical Education (1-3)**

Specialized offerings in response to emerging or selected program needs in career technical education. Prerequisite: none.

**46096 Individual Investigation in Career Technical Education (1-3)**

An individual investigation into problems and topics in career technical education. The investigation is pursued on an individual basis with an assigned faculty member. Prerequisite: none.

**46192 Practicum: Occupational (1-6)**

Supervised work experience in occupation to obtain initial experience or to update skills. Prerequisite: special approval.

**49525 Inquiry into Professional Practice (3)**

Interdisciplinary inquiry into career/technical teaching as a professional practice in education; emphasis on teacher as disciplined investigator. Final course of four. Combination of themes; utilization of teaching/learning technologies. Prerequisite: admission to advanced study.

**CENTER FOR APPLIED CONFLICT MANAGEMENT (CACM)****11001 Introduction to Conflict Management (3)**

Introduces key elements of conflict management theory and practice such as communication, collaborative problem solving, negotiation, mediation and nonviolent conflict intervention. Includes conflict communication skills development. Prerequisite: none. This course may be used to satisfy the Liberal Education Requirements (LER) and diversity requirement.

**21002 Gender, Power and Conflict (3)**

Course examines power imbalances in interpersonal relationships and the violence that often results and considers some of the ways these power imbalances are developed, focusing particularly on gender. Prerequisite: CACM 11001.

**21010 Cross-Cultural Conflict Management (3)**

This course examines cultural and gender-based components of conflict in diverse settings with special emphasis on conflict escalation and de-escalation, power disparity and conflict resolution techniques. Prerequisite: none. This course may be used to satisfy the diversity requirement.

**25095 Special Topics (3) \***

An in-depth examination of conflict management applications in various professional areas. This course is of particular value to students who plan to work in a specific field and require knowledge of conflict management skills. Prerequisite: CACM 11001.

**31003 Nonviolence: Theory and Practice (3)**

Examines the nature of violence and nonviolence on various structural levels and in different contexts. Prerequisite: none.

**31010 Conflict Theory (3)**

Explores theoretical models of conflict and addresses cultural dimensions of conflict, gender and conflict and the functions of power in conflict. Prerequisite: CACM 11001.

**32020 Strategic Planning (3)**

Course provides training in strategic planning, including assessing the current environment, developing goals and objectives and establishing a timeline for action. Prerequisite: junior standing.

**33030 Conflict in the Workplace (3)**

Explores the causes, impact and dynamics of conflict in the workplace. Issues explored include personality conflict, incivility, ethics, teams, management styles, diversity, legal issues, alternative dispute resolution, union environments and workplace violence. Prerequisite: CACM 11001.

**34040 Negotiation (3)**

Explores the dynamics of negotiation occurring in different contexts from both a theoretical and practical perspective. Prerequisite: CACM 11001.

**35050 Public Sector Dispute Resolution (3)**

Examines alternative dispute resolution principles applicable to public sector disputes, especially environmental and land use disputes. Prerequisite: none.

**35092 Internship in Conflict Management (3-12)**

(Repeatable for a total of 12 hours) Students work as interns with an organization, group or business, utilizing and enhancing their skills in conflict management. IP grade permissible. Prerequisites: junior standing and completion of two of the following courses: CACM 31003 or 31010 or 32020 or 33030 or 34040 or 35050 or 35095 or 38080 or 41010 or 49091.

**35095 Special Topics (3)**

This course is designed to provide students from other majors with special interest subjects related to their field. Prerequisite: none.

**36096 Individual Investigation in Conflict Management (3)**

Individualized program of study and literature review in area of particular interest to the student. IP grade permissible. Prerequisites: junior standing and completion of two of the following courses: CACM 31003 or 31010 or 32020 or 33030 or 34040 or 35050 or 35095 or 38080 or 41010 or 49091.

**38080 Mediation: Theory and Training (3)**

Examines the historical development of mediation. Teaches mediation skills necessary to become a practicing mediator. Prerequisite: CACM 11001.

**41010 Reconciliation Versus Revenge: Transitional Justice (3)**

"Transitional justice" refers to civil and political processes used to move from violence and tyranny to peace and democracy. War crimes tribunals, truth and reconciliation commissions, apologies, forgiveness, reparations and memorials will be examined. Prerequisite: none. This course may be used to satisfy the writing-intensive requirement with approval of major department.

**45093 Variable Topic Workshop in Conflict Management (1-6)**

Variable topic offered as need arises. Specific topics will be announced in the *Schedule of Classes*. S/U grading. Prerequisite: special approval.

\*Course ineligible to be repeated for GPA recalculation.

\*\*Courses offered only at Regional Campuses.

**49091 Seminar in Conflict Management (3)**  
An overview of qualitative and quantitative research methods used to gather and analyze data in conflict management. This course gives students experience in writing a major research paper. Prerequisites: junior standing and special approval. This course may be used to satisfy the writing-intensive requirement with approval of major department.

## CHEMISTRY (CHEM)

*Because of the substantial overlap in course content, credit will not be accepted for a mixture of courses from two or more of the following series: CHEM 10050, 10052, 10053; CHEM 10054; CHEM 10060, 10061, 10062, 10063; CHEM 10960, 10961. Credit will not be granted for both the physical science 11660-11661 series and any of the beginning chemistry series listed above.*

**10030 Chemistry in Our World (3)**  
A course for nonscience majors which utilizes environmental and consumer topics to introduce chemical principles and develop critical thinking skills. Prerequisite: none. This course may be used to satisfy the Liberal Education Requirements (LER).

**10031 Chemistry in Our World Laboratory (1)**  
Discovery-based experiments to introduce chemical principals and develop critical thinking skills. A course for nonscience majors; includes chemistry that is related to environmental and consumer issues. Pre/corequisite: CHEM 10030. Special fee: \$20 flat fee—subject to change. This course may be used to satisfy the Liberal Education Requirements (LER).

**10050 Fundamentals of Chemistry (3)**  
Basic concepts of chemistry (including atomic structure, chemical bonding and reactions) necessary for courses in elementary organic chemistry and physiological chemistry. Prerequisite: ACT Math score of 16; or MATH 10005 or 10034 or 10035 or 10036 or 11009 or 11010 or 11011 or 11012 or 12001 or 12002 or 12011 or 12021. This course may be used to satisfy the Liberal Education Requirements (LER).

**10052 Introduction to Organic Chemistry (2)**  
Chemistry of organic and biological molecules necessary for the study of physiological chemistry. Prerequisite: CHEM 10050 or 10060. This course may be used to satisfy the Liberal Education Requirements (LER).

**10053 Inorganic and Organic Laboratory (1)**  
Lab with experiments covering material from CHEM 10050, 10052 and 10054. Corequisite: CHEM 10052. Prerequisite: CHEM 10050 or 10054. Spe-

cial fee: \$20 flat fee—subject to change. This course may be used to satisfy the Liberal Education Requirements (LER).

### 10054 General and Elementary Organic Chemistry (5)

A course covering the basic concepts of general, inorganic and organic chemistry necessary for the study of physiological chemistry. Prerequisite: ACT Math score of 16; or MATH 10005 or 10034 or 10035 or 10036 or 11009 or 11010 or 11011 or 11012 or 12001 or 12002 or 12011 or 12021. This course may be used to satisfy the Liberal Education Requirements (LER).

### 10060 General Chemistry I (4)

Chemistry for science majors, emphasizing stoichiometry, introduction to chemical reactions, thermochemistry, atomic structure, periodicity, molecular structure and chemical bonding. Prerequisite: ACT math score of 18 or MATH 11009 or 11010 or 11011 or 11012 or 12001 or 12002 or 12011 or 12021.

### 10061 General Chemistry II (4)

Continuation of CHEM 10060, emphasizing intermolecular forces, properties of mixtures, main group chemistry, kinetics, equilibrium, acid-base chemistry, thermodynamics and electrochemistry. Prerequisite: CHEM 10060.

### 10062 General Chemistry I Laboratory (1)

Lab covering pertinent aspects of CHEM 10060. Three hours weekly. Pre/corequisite: CHEM 10060. Special fee: \$20 flat fee—subject to change.

### 10063 General Chemistry II Laboratory (1)

Lab covering pertinent aspects of CHEM 10061, including qualitative analysis. Prerequisite: CHEM 10062 and pre/corequisite: CHEM 10061. Special fee: \$20 flat fee—subject to change.

### 10960 Honors General Chemistry (5)

Rigorous general chemistry course for qualified students. Stoichiometry, equilibrium, thermodynamics, kinetics, bonding and structure. Four-hours lecture and three-hour lab weekly. Prerequisite: special approval. Special fee: \$ 20 flat fee—subject to change.

### 10961 Honors General Chemistry (5)

A continuation of CHEM 10960. Prerequisite: CHEM 10960. Special fee: \$20 flat fee—subject to change.

### 16001 Horticultural Chemistry (4)\*\*

This course is designed to give a general overview of basic chemical concepts to students pursuing the two-year degree in horticulture technology. Three-

hour lecture and three-hour lab weekly. Offered only at the Salem Campus. Prerequisite: none. Special fee: \$20 flat fee—subject to change.

### 20095 Special Topics (1-3)\*

(Repeated registration permissible) Selected topics in chemistry. Prerequisite: special approval.

### 20098 Introduction to Chemical Research (1-3)\*

Research experience for freshmen and sophomores. Registration requires prior approval of the research director. Does not count toward the electives for BS or BA chemistry degree. A written report is required. S/U grading; IP grade permissible. Prerequisites: 2.50 GPA in chemistry (CHEM) and special approval.

### 20111 Elementary Quantitative Analysis (4)

Theory and application of volumetric analysis; acid-base, gravimetric, complexation, redox; spectroscopic, electroanalytical and chromatographic methods of analyses. For nonmajors. Prerequisites: CHEM 10063 or 10053 and special approval.

### 20112 Elementary Quantitative Laboratory (2)

Lab practice of methods discussed in 20111. Six-hour lab weekly. Pre/corequisite: CHEM 20111. Special fee: \$40 flat fee—subject to change.

### 20284 Physiological Chemistry (4)

Chemistry and metabolism of carbohydrates, lipids, nucleic acids and proteins; regulation of metabolism, nature of enzyme action, clinical aspects of biochemistry. Prerequisite: CHEM 10052 or 10054 or 20481.

### 20285 Physiological Chemistry Lab (1)

Experiments to illustrate basic biochemical techniques, structure and metabolism. Three-hour lab weekly. Pre/corequisite: CHEM 20284. Special fee: \$20 flat fee—subject to change.

### 20481 Basic Organic Chemistry I (4)

Survey of the structure, preparation and reactions (including mechanisms) of organic compounds, emphasizing the chemistry of biologically important functional groups. Prerequisite: CHEM 10061 or 10961.

### 20482 Basic Organic Chemistry II (2)

Continuation of CHEM 20481, emphasizing the chemistry of functional groups prevalent in biological chemistry. Prerequisite: CHEM 20481 or 30481.

**30050 Introduction to Materials Chemistry (2)**  
This course provides an introduction to materials and their applications. It serves as the initiation for the materials chemistry concentration. Prerequisites: CHEM 10061 or 10961; and CHEM 30481 and PHY 23101.

**30101 Quantitative Analysis (2)**  
Fundamentals of classical and instrumental chemical analysis, including data handling, spectroscopy, electrochemistry and analytical separations. Prerequisites: CHEM 30100; and CHEM 20481 or 30481.

**30102 Quantitative Analysis Laboratory (1)**  
Provides hands-on experience with titrations, potentiometry, spectrophotometry and other traditional methods of chemical analysis. Pre/corequisite: CHEM 30101. Special fee: \$40 flat fee—subject to change. This course may be used to satisfy the writing-intensive requirement with approval of major department.

**30103 Instrumental Analysis (2)**  
Fundamentals and applications of modern methods of chemical analysis such as atomic spectroscopy, fluorometry, mass-spectrometry, voltammetry, chromatography and capillary electrophoresis. Prerequisites: CHEM 30101; and PHY 23101 and 23102; or PHY 13001 and 13002.

**30104 Instrumental Analysis Laboratory (2)**  
Provides hands-on experience with chromatography, atomic spectroscopy, IR spectroscopy, mass spectrometry, voltammetry and other modern methods of chemical analysis. Pre/corequisite: CHEM 30103. Special fee: \$80 flat fee—subject to change. This course may be used to satisfy the writing-intensive requirement with approval of major department.

**30284 Introductory Biological Chemistry (4)**  
Chemistry and metabolism of biochemically important compounds; nature of enzyme action; metabolic regulation and bioenergetics. Prerequisite: CHEM 20481 or 30481.

**30285 Biochemistry Laboratory (1)**  
Experiments on the isolation, purification and characterization of biologically important molecules; recombinant DNA technology. Prerequisite: CHEM 10063. Pre/corequisite: CHEM 30284 or 40245 or 40247. Special fee: \$40 flat fee—subject to change.

**30360 Aqueous Descriptive Inorganic Chemistry (2)**  
Chemical reactions and equilibria in aqueous solutions, including acid/base, precipitation, metal complexation, redox reactions; basic descriptive chemistry of selected main group elements. Prerequisite: CHEM 10061.

**30475 Organic Chemistry Laboratory I (1)**  
Practical experience in organic lab techniques on both micro- and macroscale; physical methods for purification and characterization of organic compounds, introduction to organic reactions. Prerequisite: CHEM 10063. Pre/corequisite: CHEM 20481 or 30481. Special fee: \$40 flat fee—subject to change.

**30476 Organic Chemistry Laboratory II (1)**  
Continuation of CHEM 30475, involving multistep organic experiments that utilize techniques introduced in CHEM 30475. Prerequisite: CHEM 30475. Pre/corequisite: CHEM 20482 or 30482. Special fee: \$40 flat fee—subject to change.

**30481 Organic Chemistry I (3)**  
Introduction to organic chemistry from structural, mechanistic and synthetic viewpoints, with an emphasis on the chemistry of biologically relevant functional groups. Prerequisite: CHEM 10061 or 10961.

**30482 Organic Chemistry II (3)**  
Continuation of CHEM 30481; organic chemistry from mechanistic and synthetic viewpoints; IR and NMR spectroscopy; mass spectrometry. Prerequisite: CHEM 30481.

**40053 Materials Chemistry Laboratory (2)**  
Exploration of the synthesis, characterization and application of inorganic and organic materials. Prerequisite: CHEM 30050. Special fee: \$40 flat fee—subject to change.

**40093 Variable Title Workshop in Chemistry (1-6)**  
S/U grading. Prerequisite: special approval.

**40099 Senior Honors Thesis (1-10)**  
For departmental honors, may be started summer prior to senior year. Register each semester during senior year. Minimum total credit—5 hours. IP grade until completion. Prerequisite: departmental and Honors College approval.

**40112 Advanced Analytical Chemistry (2)**  
Advanced study of the theory and applications of analytical methods to the study of chemical equilibria: acid-base, precipitation, complexation and redox methods. Prerequisite: CHEM 40555.

**40113 Chemical Separations (3)**  
Theory, instrumentation and applications of chemical separations for chemical analysis with an emphasis on gas and liquid chromatography. Three hours lab weekly. Prerequisite: CHEM 40555. Special fee: \$20 flat fee—subject to change.

**40114 Electroanalytical Chemistry (3)**  
The physical basis of electrochemistry; instrumentation and applications in chemical analysis. Polarography, coulometry, voltammetry and ion selective electrodes. Three hours lecture weekly. Prerequisite: CHEM 40555. Special fee: \$20 flat fee—subject to change.

**40195 Special Topics in Analytical Chemistry (1-3)**  
(Repeated registration permissible) Selected topics in analytical chemistry. Prerequisite: special approval.

**40245 Biochemical Foundations of Medicine (4)**  
Chemistry and metabolism of biologically important compounds; enzyme catalysis; metabolic regulation, inborn and induced errors of metabolism. For students in integrated life science program. Prerequisites: CHEM 30481. Pre/corequisite: CHEM 30482.

**40247 Principles of Biochemistry (4)**  
Chemistry and metabolism of biologically important compounds, enzymology, metabolic regulation and bioenergetics. Prerequisites: CHEM 20481 or 30481; and CHEM 40555 or 40567.

**40248 Advanced Biological Chemistry (3)**  
Chemistry of biologically important molecules. Advanced topics in: metabolic and enzyme regulation; enzyme kinetics and mechanism; DNA replication, recombination and repair; gene transcription and translation; recombinant DNA technology; selected areas in molecular physiology. Three hours weekly. Prerequisite: CHEM 30284 or 40245 or 40247.

**40251 Advanced Biological Chemistry Laboratory (2)**  
Practical experience in the chemistry of biologically important molecules. Properties of proteins, lipids and nucleic acids. Recombinant DNA technology. Six hours weekly. Prerequisite: CHEM 30284 or 40245 or 40247. Special fee: \$80 flat fee—subject to change. This course may be used to satisfy the writing-intensive requirement with approval of major department.

**40263 Physical Biochemistry I (3)**  
Principles and techniques of physical chemistry used in studying biomacromolecules and biological systems, spectroscopy, structure and properties of biological molecules. Prerequisite: CHEM 40555.

\*Course ineligible to be repeated for GPA recalculation.  
\*\*Courses offered only at Regional Campuses.

**40295 Special Topics in Biochemistry (1-3)**  
Selected topics in biochemistry. Prerequisite: special approval.

**40352 Inorganic Materials Chemistry (3)**  
Broad survey of the synthesis, properties, characterization and applications of inorganic materials. Prerequisites: CHEM 40361 and 30050.

**40361 Intermediate Inorganic Chemistry (2)**  
Systematic study of atomic structure, chemical bonding and properties of matter. Includes chemistry of families of elements, acid-base behavior, solvent systems and coordination compounds. Two hours lecture weekly. Prerequisite: CHEM 40555 or 40567.

**40362 Intermediate Inorganic Chemistry (2)**  
See CHEM 40361. Prerequisite: CHEM 40361.

**40364 Intermediate Inorganic Chemistry Lab (1)**  
A lab course providing experience in the synthesis of significant inorganic compounds and the techniques of various experimental and spectroscopic methods and chromatographic separations. Prerequisite: CHEM 40362. Special fee: \$40 flat fee—subject to change.

**40395 Special Topics in Inorganic Chemistry (1-3)**  
Selected topics in inorganic chemistry. Prerequisite: special approval.

**40451 Organic Materials Chemistry (3)**  
Broad survey of the synthesis, properties, characterization and applications of organic and polymeric materials. Prerequisites: CHEM 30482 and 30050.

**40476 Spectroscopic Identification of Organic Compounds (2)**  
Strategies for structural elucidation of organic compounds from analysis of infrared, proton and carbon NMR, and mass spectrometric data through lectures and problem solving. Prerequisite: CHEM 30482.

**40477 Intermediate Organic Chemistry Laboratory (1)**  
Continuation of CHEM 30476, including hands-on use of a high-field NMR spectrometer; single and multistep organic syntheses. Prerequisite: CHEM 30476. Special fee: \$40 flat fee—subject to change.

**40478 Synthesis of Organic Liquid Crystals (3)**  
Synthesis of organic thermotropic liquid crystals including nematic, smectic and discotic variants. Evaluation of the phase types using polarizing microscopy and DSC. Brief introduction into their use in display devices. Prerequisite: CHEM 30482. 2008-2009 Kent State University Undergraduate Catalog

**40483 Intermediate Organic Chemistry (1)**  
Continuation of CHEM 30482. Organic chemistry from mechanistic and synthetic viewpoints. Prerequisites: CHEM 30481 and 30482.

**40495 Special Topics in Organic Chemistry (1-3)**  
Selected topics in organic chemistry. Prerequisite: special approval.

**40555 Elementary Physical Chemistry (3)**  
Fundamental concepts of physical chemistry, with example problems chosen emphasizing applications in chemistry and the biological sciences. Prerequisites: PHY 23003 and MATH 22005 and CHEM 10061 and chemistry (CHEM) major and junior standing. Pre/corequisite: CHEM 30102 or department special approval.

**40556 Elementary Physical Chemistry (3)**  
A continuation of CHEM 40555. Areas covered include quantum mechanics, atomic and molecular structure, spectroscopy, statistical mechanics, theories of reaction rates and the solid state. Prerequisite: CHEM 40555 or PHY 45301.

**40557 Physical Chemistry Lab (2)**  
Experiments in numerous areas of physical chemistry, including the interpretation and reporting of obtained experimental data, correlation of results with theory and an introduction to the computer treatment of data. Prerequisite: CHEM 40556. Special fee: \$40 flat fee—subject to change.

**40567 Basic Concepts of Physical Chemistry (4)**  
Traditional aspects of physical chemistry with minimal calculus treatment. Applications to the health sciences emphasized. Cannot be used to satisfy requirements for chemistry concentration within the Bachelor of Science in Chemistry. Prerequisites: CHEM 10062 and PHY 13002 and MATH 12002.

**40568 Elementary Physical Chemistry Laboratory (1)**  
Provides hands-on experience with calorimetry, viscosimetry and spectroscopic techniques. Prerequisite: CHEM 40555 or 40567. Special fee: \$40 flat fee—subject to change.

**40570 Intermediate Physical Chemistry (2)**  
Special topics of physical chemistry, with applications to problems of chemical interest that are not covered in basic course. Two-hour lecture weekly. Prerequisite: CHEM 40556.

**40571 Surface Chemistry (2)**  
Treatment of basic principles and concepts in surface and colloid chemistry. Relationship to practical systems emphasized. Two-hour lecture weekly. Prerequisite: CHEM 40555 or 40567.

**40583 Physical Chemistry of Macro-molecules (2)**  
Designed to cover the basic principles of polymer science. Structure, properties and characterization of polymeric systems will be discussed. Two hours lecture weekly. Prerequisite: CHEM 40555 or 40567.

**40595 Special Topics in Physical Chemistry (1-3)**  
selected topics in physical chemistry. Prerequisite: special approval.

**40795 Current Topics in Chemical Education (1-3)**  
Recent advances in chemical research, instrumentation and theory important to chemical educators. S/U grading. Prerequisite: special approval.

**40796 Individual Investigation (1-8)**  
Registration requires prior approval of the research director. Written report required. Maximum of 2 hours may be applied to the 4-credit-hour CHEM 40000 elective requirement for the chemistry concentration within the B.S. in chemistry. S/U grading; IP grade permissible. Prerequisite: 2.50 GPA in chemistry and special approval.

## CHINESE (CHIN)

*For placement and credit in foreign language courses see Arts and Sciences—Foreign Language Requirement—Placement and Credit.*

**15101 Elementary Chinese I (4)**  
An introduction to Mandarin Chinese in the context of modern Chinese-speaking cultures. Prerequisite: none.

**15102 Elementary Chinese II (4)**  
A continuation of the introduction to Mandarin Chinese in the context of modern Chinese-speaking cultures. Prerequisite: CHIN 15101.

**25201 Intermediate Chinese I (3)**  
Continued development of speaking, listening, reading and writing skills, using a variety of cultural materials. Prerequisite: CHIN 15102.

**25202 Intermediate Chinese II (3)**  
Continuation of CHIN 25201. Prerequisite: CHIN 25201.

**30095 Special Topics (3)**  
Topic to be announced in *Schedule of Classes*. Prerequisite: special approval.

\*Course ineligible to be repeated for GPA recalculation.  
\*\*Courses offered only at Regional Campuses.

**CLASSICS (CLAS)**

**21201 English Words From Classical Elements (3)**  
Building of English vocabulary through study of basic roots from Latin and Greek; prefixes, suffixes, rules for accent and pronunciation; specialized scientific and legal terminology. Prerequisite: none.

**21404 The Greek Achievement (3)**  
A survey of the cultural achievements of the ancient Greeks as manifested in their poetry, philosophy, history and art from the Homeric period through the New Testament. Prerequisite: none. This course may be used to satisfy the Liberal Education Requirements (LER) and diversity requirement.

**21405 The Roman Achievement (3)**  
A survey of the cultural achievements of the ancient Romans as manifested in their literature and art from the Etruscans through the Christians. Prerequisite: none. This course may be used to satisfy the Liberal Education Requirements (LER) and diversity requirement.

**40793 Variable Title Workshop in Classics (1-6)**  
Workshops individually designed to provide instruction and training in specific areas of classical studies. S/U grading. Prerequisite: departmental special approval.

**41006 Roman History (3)**  
(Cross-listed with HIST 41006) A survey of Roman history from its beginnings to the fall of the Roman Empire. Prerequisite: junior standing.

**41096 Individual Investigation (1 or 3)**  
(Repeatable for a total of 9 hours) Investigation of problems in archaeology, mythology and ancient comparative literature. IP grade permissible. Prerequisite: departmental special approval.

**41097 Colloquium in Classics (3)**  
Detailed study of an aspect of antiquity that engages issues of current interest, for example women in antiquity, ancient Christianity, multiculturalism in antiquity. Prerequisite: none.

**41301 Classical Mythology (3)**  
Assessment of major streams of ancient mythology stressing broad humanistic concepts of religion, philosophy and literature. Prerequisite: sophomore standing.

**41401 Greek Archaeology and Art (3)**  
(Cross-listed with ARTH 42031) Introduction to archaeology of the Greek world with emphasis on recent discoveries and their impact on the study of Greek art, architecture and sculpture through the Hellenistic period. Prerequisite: none.

**41402 Roman Archaeology and Art (3)**  
(Cross-listed with ARTH 42032) Introduction to archaeology of the Roman world with emphasis on recent discoveries and their impact on the study of Etruscan and Roman art, architecture and sculpture through the Imperial period. Prerequisite: none.

**41503 Greek Literature in Translation (3)**  
Major works of Greek literature, studied in their historical context and by genre; knowledge of Greek is not required. Prerequisite: junior standing. This course may be used to satisfy the writing-intensive requirement with approval of major department.

**CLINICAL LABORATORY SCIENCES (CLS)**

*The courses listed below have been developed for and enrollment is limited to students admitted to the professional study year of the medical technology program.*

**Medical Technology**

**49010 Clinical Microbiology: Theory (4)**  
Theoretical consideration of lab isolation, cultivation, identification and characterization of pathogenic microorganisms. Letter grades and IP. Prerequisite: medical technology (MEDT) major.

**49011 Clinical Microbiology: Applications (4)**  
Applied and practical considerations of theoretical aspects of laboratory isolation, cultivation, identification and characterization of pathogenic microorganisms. Letter grades and IP. Prerequisite: medical technology (MEDT) major.

**49012 Clinical Immunology: Theory (1)**  
Theoretical considerations of lab practices involving quantitation and detection of antigens and antibodies and the significance of these findings in pathological states. Letter grades and IP. Prerequisite: medical technology (MEDT) major.

**49013 Clinical Immunology: Applications (1)**  
Applied and practical consideration of laboratory practices in immunology and serology relating to diagnosis of disease states. Letter grades and IP. Prerequisite: medical technology (MEDT) major.

**49014 Clinical Mycology: Theory and Applications (1)**  
Theoretical, applied and practical consideration of the isolation, identification and characterization of pathogenic fungi and their relation to human disease states. Letter grades and IP. Prerequisite: medical technology (MEDT) major.

**49015 Clinical Parasitology: Theory and Applications (1)**

Theoretical, applied and practical considerations of the isolation, identification and characterization of human parasites and their relations to pathologic conditions. Letter grades and IP. Prerequisite: medical technology (MEDT) major.

**49020 Clinical Chemistry: Theory (4)**  
Theoretical considerations of the principles of clinical chemistry relating to the identification and quantitation of biologically important substances in blood and other body fluids. Letter grades and IP. Prerequisite: medical technology (MEDT) major.

**49021 Clinical Chemistry: Applications (4)**  
Applied and practical considerations of clinical chemistry principles relating to significant changes in body fluids as the result of pathologic conditions. Letter grades and IP. Prerequisite: medical technology (MEDT) major.

**49022 Urinalysis: Theory (1)**  
Theoretical considerations of the physiological activities of the renal system together with lab principles of analysis of urine and other body fluids. Letter grades and IP. Prerequisite: medical technology (MEDT) major.

**49023 Urinalysis: Applications (1)**  
Applied and practical considerations of lab practices in urine and other body fluid analysis as aids in diagnosis of disease. Letter grades and IP. Prerequisite: medical technology (MEDT) major.

**49030 Immunohematology: Theory (2)**  
Theoretical consideration of lab procedures involved in blood grouping and typing; identification of blood group antigens and antibodies; collection and preparation of blood for transfusion. Letter grades and IP. Prerequisite: medical technology (MEDT) major.

**49031 Immunohematology: Applications (2)**  
Applied and practical consideration of lab methods for the administration of blood and its components. Letter grades and IP. Prerequisite: medical technology (MEDT) major.

**49032 Coagulation: Theory and Applications (1)**  
Theoretical consideration of the coagulation mechanism and its relation to pathological states; identification of abnormalities and deficiencies. Letter grades and IP. Prerequisite: medical technology (MEDT) major.

\*Course ineligible to be repeated for GPA recalculation.  
\*\*Courses offered only at Regional Campuses.

**49033 Clinical Hematology: Theory (2)**

Theoretical considerations of the development of formed elements; identification of marrow and blood cells; study of normal and abnormal cellular blood components. Letter grades and IP. Prerequisite: medical technology (MEDT) major.

**49034 Clinical Hematology: Applications (2)**

Applied and practical consideration of lab methods and procedures in identification and enumeration of normal and abnormal formed elements of blood. Letter grades and IP. Prerequisite: medical technology (MEDT) major.

**49040 Topics in Laboratory Management (1)**

(Repeatable for a total of 4 hours) Consideration of topics relating to safety, education, personnel, budgeting, scheduling and medical-legal problems. Letter grades and IP. Prerequisite: medical technology (MEDT) major.

**49095 Special Topics in Medical Technology (1-4)**

(Repeatable for a total of 4 hours) Topical consideration of special techniques encountered in nuclear medicine, cytology, cytogenetics, virology, toxicology and special instrumentation. Letter grades and IP. Prerequisite: medical technology (MEDT) major.

**COMMUNICATION STUDIES (COMM)****10000 Fundamentals of Speech (3)**

Introduction to skill development in spontaneous speaking, short organized presentations, questioning, critical and appreciative listening, and use of rhetorical strategies. Prerequisite: none.

**15000 Introduction to Human Communication (3)**

An inquiry into the nature and function of human communication in interpersonal, group and public contexts. Prerequisite: none. This course may be used to satisfy the Liberal Education Requirements (LER).

**20000 Foundations of Communication (3)**

This cornerstone course will introduce pre-communication studies majors to the communication discipline by acquainting students with career information, major requirements, skills needed in major courses and database and Internet search strategies. Prerequisite: pre-communication studies (PCOM) major.

**20001 Interpersonal Communication (3)**

Introduction to human interpersonal communication. Components and structures, situations and contexts are described; nonevaluative focus with emphasis on informal experience. Prerequisite: none.

**21000 Communication Grammar Review (1)**

Designed to increase grammar, punctuation, spelling, and syntax skills and proficiency. Students must earn a minimum grade of C (2.0) in this course to fulfill the grammar requirement. If they fail to earn a C (2.0) or better in COMM 21000 after three attempts, they are not permitted to continue in the communication studies program. Does not count toward Communication course requirements. Prerequisite: none.

**25454 Intercollegiate Forensics I (1-2)\***

(Repeatable for a total of 8 hours) Practicum in intercollegiate forensics for freshmen, sophomores and beginning forensic students. Maximum of 4 credit hours may apply to the communication major. S/U grading. Prerequisite: special approval.

**25464 Argumentation (3)**

Introduction to principles of oral and written argumentation. Prerequisite: COMM 15000.

**25851 Communication for Teachers (3)**

Principles, skills and responsibilities of oral communication as central to the process of teaching all grades and subjects. Focuses upon speaking and listening with pupils, peers and parents. Prerequisite: integrated language arts (INLA) major.

**25863 Business and Professional Communication (3)**

Fundamentals of public and conference speaking, conducting meetings, electronic presentations, interviewing and interpersonal relations as applied to business and organizational settings. Prerequisite: none.

**25902 Communication Theory (3)**

Study of the process of human communication. Emphasis on source, message, channel and receiver dimensions of communication. Examination of major theories of communication and social influence. Prerequisite: none.

**26000 Criticism of Public Discourse (3)**

A critical examination of selected public speeches representing diverse viewpoints on a variety of historic and contemporary issues, emphasizing methods of evaluating public oral communication and the role of speechmaking in free societies. Prerequisite: sophomore standing. This course may be used to satisfy the Liberal Education Requirements (LER) and diversity requirement.

**26001 Public Communication in Society (3)**

Examines communication in public settings. Content includes issues in mass media, political communication and political advertising, news, crisis communication, public opinion, and communication in executive, legislative and judicial settings. Students explore the influence of mediated messages via application of mass communication theories and constructs. Prerequisites: none.

**30000 Communication Research Methods (3)**

Introduction to qualitative and quantitative research methods in communication. Students should complete this course early in their program of study. Prerequisites: communication studies (COMM) major and COMM 25902.

**35252 Theories of Rhetorical Discourse (3)**

Exploration of rhetoric as the faculty of influencing human decisions through persuasion and as an instrument for the analysis of attempts at communication. Prerequisite: COMM 15000.

**35454 Intercollegiate Forensics II (1-2)**

(Repeatable for a total of eight hours) Advanced practicum in intercollegiate forensics for juniors and seniors with forensics experience. Maximum of 4 credit hours may apply to the communication major. S/U grading. Prerequisite: special approval.

**35550 Small Group Communication (3)**

An examination of group communication in social and family contexts throughout the life span. Prerequisite: minimum grade of C (2.0) in COMM 20000; and pass the Grammar Test with a 680 or better or have a minimum grade of C (2.0) in COMM 21000; and a cumulative GPA of 2.25 or better.

**35600 Communication in Teams (3)**

Examines communication processes and research related to teambuilding, decision-making, task groups and leadership within the organizational context. Prerequisite: minimum grade of C (2.0) in COMM 20000; and pass the Grammar Test with a 680 or better or have a minimum grade of C (2.0) in COMM 21000; and a cumulative GPA of 2.25 or better.

**35852 Intercultural Communication (3)**

Theory and application of communication between people of different cultures and different national systems. Prerequisite: none. This course may be used to satisfy the diversity requirement.

**35860 Interviewing (3)**

Techniques, principles and practical skills for interviews most likely to occur in business environments; job searches and selection interviews, information-gathering interviews, performance appraisals, counseling interviews and persuasive interviews. Prerequisite: none.

**35864 Organizational Communication (3)**

Application of communication theory to organizational settings. Exploration of communication structures, processes and methods in organizations. Prerequisite: minimum grade of C (2.0) in COMM 20000; and pass the Grammar Test with a 680 or better or have a minimum grade of C (2.0) in COMM 21000; and a cumulative GPA of 2.25 or better. This course may be used to satisfy the writing-intensive requirement with approval of major department.

**35912 Gender and Communication (3)**

Examines influence of gender in interpersonal and organizational communication including communication processes in interpersonal violence, STDs and other contemporary social problems. Prerequisite: none. This course may be used to satisfy the diversity requirement.

**40001 Advanced Interpersonal Communication (3)**

Advanced treatment of interpersonal communication theory and research. Interpersonal principles are applied to group and organizational contexts. Prerequisite: Prerequisites: COMM 20001 and minimum grade of C (2.0) in COMM 20000; and pass the Grammar Test with a 680 or better or have a minimum grade of C(2.0) in COMM 21000; and a cumulative GPA of 2.25 or better. This course may be used to satisfy the writing-intensive requirement with approval of major department.

**45006 Media Use and Effects (3)**

Examination of the ways in which communication scholars have conceptualized and analyzed media processes, uses and effects. Issues explored include media portrayals, news coverage, political campaigns, sex and violence in the media, media entertainment, children and television and newer communication technologies. Prerequisite: none.

**45007 Freedom of Speech (3)**

Examines historic and contemporary instances relating to freedom of speech; study of limits, rights, responsibilities and socio-legal-rhetorical issues. Prerequisite: none.

**45091 Seminar in Communication Studies (1-4)**

(Repeatable up to 9 credit hours). Examination of selected communication topics/areas and related research. Prerequisite: none.

**45092 Internship in Communication Studies (3-6)**

A formal, cooperative field experience with a designated organization or agency, as designed by the students and the internship coordinator. S/U grading; IP grade permissible. Prerequisite: special approval.

**45093 Variable Title Workshop in Communication (1-5)**

No more than 3 credits may be counted as part of the upper-division credits required in the communication studies major. S/U grading. Prerequisite: none.

**45095 Special Topics in Communication Studies (1-6)**

Offered when unusual resources permit a topic different from existing courses. Topic is announced when scheduled. S/U grading. Prerequisite: none.

**45154 Rhetorical Criticism (3)**

Standards of criticism in public discourse and methods for their application in persuasive speaking. Prerequisite: minimum grade of C (2.0) in COMM 20000; and pass the Grammar Test with a 680 or better or have a minimum grade of C (2.0) in COMM 21000; and a cumulative GPA of 2.25 or better. This course may be used to satisfy the writing-intensive requirement with approval of major department.

**45196 Independent Study: Communication Studies (1-6)**

(Repeatable for a total of 6 credits) Readings and/or research on problems approved by undergraduate coordinator in consultation with students' advisor and faculty project director. S/U grading; IP grade permissible. Prerequisites: communication studies (COMM) major and special approval.

**45459 Communication and Conflict (3)**

Examination of issues related to managing conflict in communication. Critique and synthesis of conceptual approaches and research pertaining to conflict in interpersonal, organizational and public communication settings. Prerequisite: minimum grade of C (2.0) in COMM 20000; and pass the Grammar Test with a 680 or better or have a minimum grade of C (2.0) in COMM 21000; and a cumulative GPA of 2.25 or better.

**45780 Co-Curricular Speech Programs (3)**

Consideration of educational principles and methods of coaching and directing co-curricular speech activities. Aims and typical problems in forensics, theatre and other speech programs. Prerequisite: COMM 25851.

**45807 High Impact Professional Speaking (3)**

Principles and practices of effective communication in a variety of professional contexts. Emphasis on professional presentation skills development. Prerequisites: COMM 15000 and junior standing.

**45865 Organizational Communication Training and Development (3)**

Theory and application of diagnosing communication problems in an organization and the intervention process. Prerequisites: COMM 35864 and minimum grade of C (2.0) in COMM 20000; and pass the Grammar Test with a 680 or better or have a minimum grade of C (2.0) in COMM 21000; and a cumulative GPA of 2.25 or better.

**45902 Communication and Influence (3)**

Explores theories and strategies of social influence in contemporary society. Students discuss and critique influential communication practices such as interpersonal persuasion, product and services advertisements, social movements and political messages. Course addresses global perspectives on persuasion. Prerequisites: COMM 25902 and minimum grade of C (2.0) in COMM 20000; and pass the Grammar Test with a 680 or better or have a minimum grade of C (2.0) in COMM 21000; and a cumulative GPA of 2.25 or better. This course may be used to satisfy the writing-intensive requirement with approval of major department.

**45957 Language and Meaning (3)**

Examines the influence of verbal codes in human communication. Theories of meaning are explored through readings, field study and class exercises. Prerequisite: COMM 25902. This course may be used to satisfy the writing-intensive requirement with approval of major department.

**45959 Nonverbal Communication (3)**

Survey of theory and research in nonverbal codes of communication through readings, field study and classroom interaction. Prerequisite: COMM 30000 and minimum grade of C (2.0) in COMM 20000; and pass the Grammar Test with a 680 or better or have a minimum grade of C (2.0) in COMM 21000; and a cumulative GPA of 2.25 or better.

**45960 Health Communication (3)**

Examines communication processes and research related to health and health care from the perspectives of public, professional and primary discourses. Prerequisite: none.

**46091 Senior Seminar (3)**

This capstone course helps students synthesize major coursework. Students complete a senior thesis or project, examine ethics and issues in communication and also do a portfolio of their achievements. IP grade permissible. Prerequisites: minimum grade of C (2.0) in COMM 20000; and pass the Grammar Test with a 680 or better or have a minimum grade of C (2.0) in COMM 21000; and a cumulative GPA of 2.25 or better; and senior standing.

\*Course ineligible to be repeated for GPA recalculation.

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**46092 Practicum in Applied Communication (3)**  
A formal cooperative field experience with a designated organization or agency, as designed by the student and the practicum director. IP grade permissible. Prerequisite: communication studies (COMM) major and senior standing and special approval.

### COMPUTER DESIGN AND ANIMATION ENGINEERING TECHNOLOGY (CADT)\*\*

**22000 Advanced CAD (2)**  
The use of advanced concepts and techniques of computer-aided drafting and design and related productivity improvement tools for two- and three-dimensional drawings. Prerequisite: IERT 12005.

**22001 CAD: Architecture (2)**  
Comprehensive study of the use of a popular computer-aided drafting package for architectural design, including systems management methods and project planning concept. Prerequisite: IERT 12005.

**22002 CAD: Civil Applications (2)**  
A course on the use of computer-aided drafting and design for civil engineering applications. Prerequisite: none.

**22003 Solid Modeling (2)**  
A course in solid modeling using computers. Modeling techniques using regional and solid modular for two-dimensional regions and three-dimensional solids. Prerequisite: CADT 22000.

**22004 Computer Animation (3)**  
A course in 3-D modeling and computerized techniques. An introduction to multimedia development and delivery of animated production. Prerequisite: CADT 22000.

**22005 Multimedia and Virtual Reality (2)**  
A course covering the concepts and techniques for designing and production of effective multimedia applications. Creation of presentations of graphics, text, sound and video. Prerequisite: CADT 22000.

### COMPUTER SCIENCE (CS)

**10001 Computer Literacy (3)**  
Introduction to history, language, procedures, applications, abuses and impact of computers. Hands-on experience with microcomputers. Not open to students with previous experience. Prerequisite: none. Special fee: \$20 flat fee—subject to change.

**10051 Introduction to Computer Science (4)**  
An introductory, broad and hands-on coverage of aspects of computer science including: algorithms, problem solving, operating systems concepts, computer architecture and programming languages. Three credit lecture with one credit lab. Prerequisites: MATH 11009 or 11010 or appropriate test score(s). Special fee: \$20 flat fee—subject to change. This course may be used to satisfy the Liberal Education Requirements (LER).

**10061 Introduction to Computer Programming (3)**  
Emphasizes programming in a high-level language, includes structured programming, program design, expressions, data control, arrays, records, strings and functions. Prerequisite: MATH 11011 or 12001. Special fee: \$20 flat fee—subject to change.

**19995 Special Topics in Computer Science (1-3)\***  
(Repeat registration permissible) Special topics from all areas of computer science. Prerequisite: special approval.

**23021 Computer Science I—Programming and Problem Solving (4)**  
Computer science concepts, including algorithm development and problem-solving strategies focused on procedural abstraction. High-level programming concepts, including data types, expressions, program structures, functions, parameter passing scope, extent, arrays, introduction to recursion and an introduction to object-oriented concepts. Three-hour lecture and one-hour lab weekly. Prerequisite: minimum C (2.0) grade in CS 10051. Special fee: \$26.68 flat fee—subject to change.

**23022 Discrete Structures for Computer Science (3)**  
(Cross-listed with MATH 23022) Discrete structures for computer scientists with a focus on mathematical reasoning, combinatorial analysis, discrete structures, algorithmic thinking, applications and modeling. Specific topics include logic, sets, functions, relations, algorithms, proof techniques, counting, graphs, trees, Boolean algebra, grammars and languages. Prerequisites: CS 10051; a grade of C (2.0) or better in MATH 12001; or in MATH 11022 and either MATH 11010 or 11011; or Compass algebra score of 55 or better and either SAT math score of 540 or better or ACT math score of 23 or better.

**29995 Special Topics in Computer Science (1-3)\***  
(Repeat registration permissible) Special topics from all areas of computer science. Prerequisite: special approval.

**31045 Formal Logic (3)**  
(Cross-listed with PHIL 31045 and MATH 31045) Study of the first order predicted calculus with identity and function symbols. Prerequisite: none.

**33001 Computer Science II - Data Structures and Abstraction (3)**  
Computer science concepts and problem solving focusing on data abstraction. Object-oriented concepts and programming, including encapsulation, information hiding, object design, generics, polymorphism and an introduction to inheritance. Dynamic memory structures, including dynamic arrays, pointers, linked-lists and the use of recursion for problem solving. Abstract data types, including stacks, queues, lists, trees and graphs. Prerequisite: CS 23022 and minimum C (2.0) grade in CS 23021. Special fee: \$20 flat fee—subject to change.

**33006 Social and Ethical Issues in Computing (3)**  
Social issues, including historical and social context, professional responsibilities, risks and liabilities, and intellectual property. Prerequisite: minimum C (2.0) grade in CS 33001. This course may be used to satisfy the writing-intensive requirement with approval of major department.

**33011 Speed Programming (3)**  
(Repeated registration permissible) Discussion and practice of pertinent aspects related to programming under time constraints. Corequisite: CS 33001.

**33092 Speed Programming Practicum (2)**  
(Repeated registration permissible) Practice of pertinent aspects from CS 33011. Prerequisite: CS 33011.

**33101 Structure of Programming Languages (3)**  
Introduction to syntax, semantics, behavior and implementation issues in imperative, functional, logic and object-oriented languages; type theory, concurrency, data dependency, nondeterminism and Internet languages. Prerequisite: minimum C (2.0) grade in CS 33001.

**33192 Internship in Computer Science (1-3)**  
Supervised work experience in computer science. Since this work will be outside the department, a report and final presentation will be required; a site visit might also be necessary. S/U grading; IP grade permissible. Prerequisites: CS 33006 and special approval.

**33211 Operating Systems (3)**

Introduction to operating systems, processes and threads, CPU scheduling, mutual exclusion and synchronization, deadlock, memory management, file systems, networking and distributed systems. Prerequisites: CS 35101 and minimum C (2.0) grade in CS 33001. Special fee: \$10 flat fee—subject to change.

**33223 Unix Tools (3)**

Course will cover UNIX operating system environment topics that will make the user more productive. Topics will include the user environment, shells, files, the file system, editors, scripting languages, document processing, processes, remote access and documentation. Prerequisite: CS 23021.

**35101 Computer Architecture (3)**

Functional overview of computer systems, interconnection of basic components, system performance measures, instruction set design, arithmetic logic unit, control unit, memory system, pipelining, interrupts and input-output. Prerequisite: CS 23021.

**39995 Special Topics in Computer Science (1-3)**

Special topics from all areas of computer science. Repeat registration permitted. Prerequisite: special approval.

**41012 Finite Mathematics (3)**

(Cross-listed with MATH 31012) A continuation of Discrete Math emphasizing combinatorial techniques, graph applications in algorithms, finite algebra, number theory and probability. Covers useful math for CS majors. Prerequisite: CS 23022.

**41045 Metalogic (3)**

(Cross-listed with MATH 41045 and PHIL 41045). Consideration of various metatheorems, including soundness and completeness of propositional and predicate calculus, undecidability of predicate calculus and incompleteness of the theory of arithmetic. Prerequisite: PHIL 31045.

**42201 Introduction to Numerical Computing I (3)**

(Cross-listed with MATH 42201) An introduction to numerical methods and software for solving many common scientific computing problems. Linear systems, least-square data fitting, nonlinear equations and systems and optimization problems. Prerequisites: MATH 12003 and 21001 and CS 23021. Special fee: \$10 flat fee—subject to change.

**42202 Introduction to Numerical Computing II (3)**

(Cross-listed with MATH 42202) A continuation of CS 42201. Topics include interpolation, numerical differentiation and integration, and numerical solution of ordinary differential equations. Prerequisites: MATH 32044 and CS 42201. Special fee: \$10 flat fee—subject to change.

\*Course ineligible to be repeated for GPA recalculation.

\*\*Courses offered only at Regional Campuses.

**43005 Database Systems Design (3)**

An introduction to the basic theoretical aspects of database systems: file organization, search methodologies, language design and performance evaluation techniques. Initial modeling concepts and their use in hierarchical, network, relational and object-oriented database designs. Prerequisite: minimum C (2.0) grade in CS 33001.

**43006 Theory of Object-Oriented Programming (3)**

In-depth course on the theory and principles of object-based and object-oriented programming using a language such as C++. The course covers advanced topics in inheritance and interface planning, generic (type-independent) programming, factors of polymorphism, structure and organization of class libraries, and object-oriented design principles. Prerequisite: CS 33001. Special fee: \$20 flat fee—subject to change.

**43111 Structure of Compilers (3)**

Techniques used to write compilers including lexical analysis, syntax analysis, syntax-directed translation, type checking, run-time environments and intermediate code generation. Prerequisites: CS 35101 and 33101. Special fee: \$20 flat fee—subject to change.

**43202 Systems Administration (3)**

The setting up and day-to-day administration of multiuser, multitasking systems, such as the various versions of UNIX, together with the analysis of problems which can arise in these activities. Prerequisite: CS 33211.

**43203 Systems Programming (3)**

Implementation and maintenance of system programs, system utilities, command interpreters, editors, file maintenance programs, text processors. Interrupt handling. Device drivers. Prerequisite: CS 33211. Special fee: \$20 flat fee—subject to change.

**43901 Software Engineering (3)**

An introduction to software engineering concepts: life cycle models; modeling languages; requirements analysis; specification; design; testing; validation; project management and maintenance. Prerequisite: minimum C (2.0) grade in CS 33001. Special fee: \$20 flat fee—subject to change.

**44201 Artificial Intelligence (3)**

Examines goals, problems, concepts and methods of artificial intelligence, heuristic versus algorithmic methods, natural language comprehension, theorem proving. Prerequisite: CS 33001. Special fee: \$10 flat fee—subject to change.

**45111 Principles of VLSI Design (3)**

Introduction to the design of VLSI chips, with emphasis on FPLD-based design. Students will design various chips using standard industry logic synthesis tools. Prerequisite: CS 35101. Special fee: \$30 flat fee—subject to change.

**45201 Computer Communications Networks (3)**

An introduction to net-centric systems, data communication protocols, network architectures, routing protocols, network management, congestion control, network security, compression techniques, mobile and wireless networks, and the World Wide Web as an example of a client-server system. Prerequisite: CS 33211. Special fee: \$10 flat fee—subject to change.

**45231 Internet Engineering (3)**

Design fundamentals and working principles of Internet systems at the IP layer and above. DNS, inter-domain routing, Internet client server programming, application level protocols (HTTP, XML, etc.), Web server architecture, browser, Internet security and multimedia serving. Prerequisites: CS 33001 and 33211 and 45201. Special fee: \$20 flat fee—subject to change.

**46101 Design and Analysis of Algorithms (3)**

Introduction to algorithmic concepts, design and complexity analysis of algorithms, searching, sorting, graphs, geometric, algebraic and parallel algorithms. Prerequisites: MATH 12003 and minimum C (2.0) grade in CS 33001.

**46201 Introduction to Theory of Automata, Formal Languages, Computation (3)**

A study of alphabets, strings, languages, regular languages and expressions, deterministic and non-deterministic finite automata, context-free grammars and languages, pushdown automata, Turing machines and complexity theory. Prerequisites: CS 23022 and MATH 12003.

**47101 Computer Graphics (3)**

Display file generation, interactive graphics techniques, display devices, three-dimensional graphics, graphic system design, graphic languages and applications in man-machine communications. Prerequisite: CS 33001. Special fee: \$20 flat fee—subject to change.

**47105 Web Design and Programming I (3)**

(Cross-listed with VCD 46000) A joint computer science and visual communication design course on Web concepts and high-quality Web design: CS, VCD, principles, tools, architecture, presentation, design and creation of Web sites by teamwork. Web-based instruction is used. IP grade permissible. Prerequisites: CS 33001 and VCD 37000.

**47106 Web Design and Programming II (3)**  
(Cross-listed with VCD 46002) A joint computer science and visual communication design course on advanced Web techniques and multimedia Web design: Web servers, security, advanced design, Java servlets, applets, database connectivity, site maintenance, creation of actual Web sites by teamwork. IP grade permissible. Prerequisite: CS 47105.

**47107 Web Design and Programming Studio (3-6)**

(Cross-listed with VCD 46053) A joint computer science and visual communication design project course. Comprehensive experience on aspects of Web site creation, hosting, maintenance and management. Creative combination and integration of art and programming are emphasized. IP grade permissible. Prerequisites: CS 47106 and VCD 46003. Special fee: \$6.67/credit hour—subject to change.

**47201 Human Computer Interaction (3)**

Approaches the human-computer interaction as an activity of the human whose productivity is increased by the use of the computer as a tool. Examines physiology and psychology, considers the structure and operation of the computer and models the interaction between the two. Prerequisite: CS 33001.

**47205 Information Security (3)**

An introduction to concepts and methodology useful for information security, as specified by the NSTISSI No. 4011 standard from the NSA. Prerequisite: CS 33006.

**49901 Capstone Project (4)**

The course is an integrative experience that brings together all components of the undergraduate computer science curriculum in an applied, hands-on, real-world setting. This course is three hours lecture and one hour lab. Prerequisites: CS 45201 and 43901 and 33006 and 43005.

**49995 Special Topics in Computer Science (1-4)**

(Repeat registration permissible) Special topics from all areas of computer science. Prerequisite: special approval.

**49996 Individual Study (1-4)**

Prerequisite: special approval of instructor.

**49998 Research (1-15)**

Prerequisite: special approval.

**11002 Visual Basic Programming (3)**

Laboratory course in the visual basic net language introducing concepts of object-oriented, event driven program design and implementation. MATH 10005 or 10032 or 10033 or 10034 should be taken while taking this COMT 11002 course if the student does not have equivalent math knowledge. Corequisite: MATH 10005 or 10032 or 10033 or 10034 or 10035 or 10036 or Compass Algebra test score of at least 41 or Compass Pre-algebra test score of at least 61.

**11003 Selected Programming Languages (2-4)\***

Lab course covering a selected programming language. Data types, control structures, data representation, testing, debugging, unique features of language. Repeated registration permitted for different languages. Prerequisite: COMT 11002 or 21001.

**11004 Survey of Information Technology (3)**

This overview course will provide an introduction to information technologies, career paths and professional certifications available. Prerequisite: none.

**11005 Introduction to Operating Systems and Networking Technology (3)**

(Cross-listed with ITAP 16605) Lab-oriented survey of desktop/network OS essentials including file/disk management, system tools utilization, resource sharing and introductory network concepts. Prerequisite: none.

**11006 Introduction to Web Site Technology (3)**

Focuses on web site technologies including HTML. Students learn the history of the internet and effective search techniques. Prerequisite: none.

**11009 Computer Assembly and Configuration (4)**

Lab course covering disk operating system function and features; hardware/software installation procedures; file and directories management; system configuration/optimization; backup procedures. Prerequisite: COMT 11005 or COMT faculty special approval. Special fee: \$100 flat fee—subject to change.

**12000 Personal Productivity Software (3)**

Covers the concepts and integration of computer applications. Emphasis on software suites, specifically word processing, electronic spreadsheets, database and presentation applications. Prerequisite: none.

**20001 C++ Programming (3)**

Laboratory course using C++ introducing concepts of software development, object-oriented/event driven programming, testing and debugging, simple and complex data types, language syntax and semantics. MATH 10005 or 10032 or 1003 or 10034 should be taken while taking this COMT 20001 course if the student does not have equivalent math knowledge. Corequisite: MATH 10005 or 10032 or 10033 or 10034 or 10035 or 10036 or Compass Algebra test score of at least 41 or Compass Pre-algebra test score of at least 61.

**20011 Java Programming (3)**

Lab course using Java introducing concepts of software development, object-oriented/event-driven programming, testing and debugging, simple and complex data types, language syntax and semantics. Prerequisite: MATH 10005 or MATH 10034 or pre/corequisite: MATH 10035 or 10036 or minimum 51 Compass Algebra test score.

**21002 Network Setup and Configuration (4)**

Lab course introducing networking in LAN and WAN environments. Topics include network protocol, configuration, operation, setup, installation, administration, management and security. Pre/corequisite: COMT 11009 or COMT faculty special approval.

**21005 Visual Basic Database Programming (4)**

Advanced lab course in the visual basic language focusing on database systems development. Prerequisite: COMT 11002.

**21006 Assembly Language Programming (3)**

A course in Assembly Language Programming with applications in software development and an introduction to hardware interfacing to input/output devices. Prerequisite: COMT 11002 or 20001.

**21007 Internet Ethics and Policies (3)**

This course will cover the ethics, issues and policies regarding the Internet. It includes discussion/research on intellectual property/freedom, hacking, pornography, privacy, etc. Prerequisite: none.

**21008 Computer Methods in Science and Engineering (3)**

Use of computers in problems related to science and engineering. Course will include introduction to elements of a high-level scientific language. Prerequisites: MATH 12001 and 19001.

**COMPUTER TECHNOLOGY (COMT)\*\***

**11000 Introduction to Computer Systems (3)**  
Lab course covering basics of computer systems, including hardware, personal productivity software, Internet usage and file management. Prerequisite: none.

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\*Course ineligible to be repeated for GPA recalculation.

\*\*Courses offered only at Regional Campuses.

**21009 Seminar in Computer Technology (3)**  
Capstone course for COMT students encompassing critical reading, writing and discussion applying the current theories of computer technologies to on-the-job experiences. Students will develop a portfolio to confirm their level of knowledge. Prerequisite: COMT 11002 and 11005 and 11006 and 11009 and 21002 and 21010.

**21010 Workgroup Productivity Software (3)**  
Research project-oriented course emphasizing workgroup methodologies for group project management, problem definition, data retrieval and analysis, conclusions and recommendations. Prerequisite: COMT 12000 or COMT faculty special approval.

**21011 Techniques of Multimedia Web Design (3)**

This lab-oriented course will focus on developing and managing effective Web sites using multimedia elements including sound and video. Prerequisite: COMT 11006 or COMT faculty special approval.

**21036 Web Scripting I (3)**

This course will focus on both client-side and server-side scripting needed to create interactive and dynamic Web sites. The use of scripting in context with various technologies will be explored. Prerequisites: COMT 11002 and COMT 11006, or COMT faculty special approval.

**21092 Computer Practicum (2)**

(Cross-listed with MATH 21092) Supervised work experience in a computer installation. S/U grading. Prerequisite: COMT 11009.

**21095 Special Topics in Computer Technology (1-4)\***

Topics announced when scheduled. Prerequisite: special approval.

**21096 Individual Investigation in Computer Technology (1-4)\***

Individual study in computer field. Open to computer technology majors. Prerequisite: special approval.

**21100 Local Area Network Troubleshooting (3)**

Lab course covering local area network troubleshooting techniques. Topics will include identifying the scope of the problem, systematic troubleshooting approaches, problem resolution and ongoing maintenance. Prerequisite: COMT 21002.

**21110 Internetworking (3)**

Lab course introducing Internetworking concepts. Topics will include networking standards, cabling, TCP/IP, router configuration, LAN and WAN segments and other related topics. Prerequisites: COMT 21002 or full-time COMT faculty special approval.

## COUNSELING AND HUMAN DEVELOPMENT SERVICES (CHDS)

**10001 Introduction to a Career in Teaching (2)**

Students considering teaching as a career will explore all aspects of an educator's role, will evaluate career and personal development as related to the education profession and will participate in observation experience. This course is a preprofessional experience coordinated by ACHVE department. Prerequisite: none.

**10002 Introduction to Careers in Education, Health and Human Services (3)**

Explores roles of educators and health and human service providers in community and school settings. Introduction to work of professionals in such areas as youth organizations; recreational, mental health and child and family services; museums and parks; and health and allied health agencies. Assessment of career interests is conducted. Prerequisite: none.

**20092 Field Experience I: Middle Childhood (1)\***

Course augments from an experiential perspective knowledge of early adolescence period of development. Placement in school settings (30 hours). S/U grading; IP grade permissible. Corequisite: HDFS 24013.

**37700 Human Relations in a World of Diversity (3)**

Emphasizes the study/practice of facilitative human relations in personal and work/career spheres. Topics include but not limited to, gender, sexual orientation, multiculturalism, conflict resolution, value clarification and family influence. Prerequisite: none.

**37800 Small Group Process (2)**

(Cross-listed with HED 34060) Students learn to understand the dynamics of problem-solving groups and how to become effective leaders and members. Topics include climate, goals, decision making, communication, leadership, membership. Experience-based learning combined with conceptualizing. Prerequisite: none.

**40093 Variable Title Workshop in Counseling and Human Development Services (1-4)**

(Repeated registration permissible) Topics of special interest to students who desire to increase their knowledge in counseling and related areas. Kent State faculty and experts from other institutions and agencies. Topics will be announced in the *Schedule of Classes*. S/U grading. Prerequisite: none.

**41791 Seminar: Educational Studies and Helping Professions (3)**

Directed discussion applying concepts from previous educational experiences to the internship work experience. Corequisite: CHDS 41892.

**41892 Internship in Educational Studies and Helping Professions (10)**

Placement in a worksite congruent with student's career aspirations. Ten hours/week for 15 weeks for two semesters or 20 hours/week for 15 weeks, one semester for a total of 300 hours. S/U grading; IP grade permissible. Corequisite: CHDS 41791. Prerequisite: senior standing.

**44084 Behavioral Science in Health Professions (1-3)**

(Repeatable for a total of 12 hours) Behavioral science perspective on individual and social issues affecting medical care delivery. Individually arranged. May include field projects, participation in health-related investigations and presentations and personal development programs. Prerequisite: special approval.

## CURRICULUM AND INSTRUCTION (CI)

**40093 Variable Title Workshop in Curriculum and Instruction (1-5)**

Variable topic workshop designed to respond to curriculum trends and issues, and specialized needs. S/U grading, IP grade permissible. Prerequisite: special approval.

**47095 Special Topics in Curriculum and Instruction (1-5)**

IP grade permissible. Prerequisite: special approval.

**47096 Individual Investigation in Curriculum and Instruction (1-5)**

Prerequisite: special approval.

**47195 Special Topics in Curriculum and Instruction (1-5)**

Student teaching. S/U grading, IP grade permissible. Prerequisite: special approval.

**47330 Reading and Writing in Adolescence/Adulthood (3)**

Understanding of literacy learning in adolescence and adulthood (ages 12-21) with an emphasis on strategies for text learning, literacy in electronic environments and the teaching of students who struggle as readers and writers. Prerequisite: admission to advanced study.

\*Course ineligible to be repeated for GPA recalculation.

\*\*Courses offered only at Regional Campuses.

**47501 Teaching Mathematics in Early and Middle Grades (3)**

Addresses pedagogical content knowledge for the teaching and learning of mathematics in grades K-9, based on the national content and process standards. Prerequisites: advanced standing and minimum C (2.0) grade in MATH 14001 or 14002. Special fee: \$5/credit hour—subject to change.

**47502 Science Teaching in Early and Middle Grades (3)**

Addresses pedagogical content knowledge for the teaching and learning of science in grades K-9. In addition, students examine how to best align science practice to state and national science standards. Prerequisite: admission to advanced study. Course fee: \$5/credit hour—subject to change.

**47503 Teaching Social Studies in Early and Middle Grades (3)**

Addresses pedagogical content knowledge for the teaching and learning of social studies in grades K-9, based on the national content and process standards. Prerequisite: admission to advanced study.

**47504 Teaching Reading and Writing in Middle Grades (3)**

Addresses pedagogical content knowledge for the teaching and learning of reading and writing in grades 4-9, based on the national content and process standards. Prerequisite: admission to advanced study.

**DANCE (DAN)****17001 Studio Modern I (1)**

Practice of basic modern dance technique. Open to all university students. Prerequisite: none.

**17002 Studio Modern Dance II (1)**

Exploration of modern dance technique foundations and improvisation with emphasis on the movement and performing qualities of modern dance. Open to all university students. Prerequisite: DAN 17001.

**17004 Studio Jazz I (1)**

Practice of basic jazz techniques. Open to all university students. Prerequisite: none.

**17005 Studio Jazz II (1)**

Continuation of jazz dance technique foundations with emphasis on more advanced dance combinations. Open to all university students. Prerequisite: DAN 17004.

**17007 Studio Tap I (1)**

Basic tap steps and combinations with varying sound intensities and rhythms. Open to all university students. Prerequisite: none.

**17008 Studio Tap II (1)**

Continuation of tap dance technique foundations with emphasis on more advanced dance combinations. Prerequisite: DAN 17007.

**17009 Studio Tap III (1)\***

(Repeatable for a total of 8 credit hours) Advanced tap dance techniques with emphasis on clarity, speed and performance skills. Prerequisite: DAN 17008.

**17010 Studio Ballet I (1)**

Introduction to the foundations of ballet placement, vocabulary and movement for the beginner. Open to all university students. Prerequisite: none.

**17011 Studio Ballet II (1)**

Continuation of ballet technique foundations with emphasis on more advanced dance combinations. Open to all university students. Prerequisite: DAN 17010.

**17013 Studio African Dance I (1)**

Designed to acquaint students with basic elements of African dance. Open to all university students. Prerequisite: none.

**17014 Studio African Dance II (1)**

Continued development of African movement styles and rhythms. Open to all university students. Prerequisite: DAN 17013.

**17016 Studio Swing Dance I (1)\***

(Repeatable to 2 credit hours) Practice of basic swing dance movements with emphasis on social partnering skills. Open to all students. Prerequisite: none.

**17049 Fundamentals of Ballet and Modern Dance (2)**

Introduction to intensive exploration of ballet and modern dance technique for non-majors with special emphasis on alignment, body awareness and movement vocabulary. Prerequisites: DAN 17001 and 17010.

**17050 Introduction to Dance (1)**

Overview of modern dance as a performing art. Specifically, focusing on preparation, basic knowledge and career choices. Prerequisites: dance (DANC) major and special approval.

**17051 Modern Dance Technique I-A (3)\***

(Repeatable for a total of 12 credit hours) Development of skill acquisition in basic technique, understanding and appreciation for the creative nature of dance through exposure to improvisational experiences. Prerequisites: dance (DANC) major and special approval.

**17052 Ballet I-A (2)\***

(Repeatable for a total of 8 credit hours) Ballet techniques: Pre-barre, beginning barre and beginning center work. Prerequisites: dance (DANC) major and special approval.

**17053 Principles of Dance Mechanics I (2)**

The study and application of alignment and basic movement principles to dance techniques. To be taken with DAN 17051 or 17052. Prerequisites: dance (DANC) major and special approval. Corequisites: DAN 17051 or 17052.

**17151 Modern Dance Technique I-B (3)\***

(Repeatable for a total of 12 credit hours) Continued exploration of basic modern dance technique and improvisation begun in DAN 17051 or equivalent. Continued study of dance innovators and their historical significance. Prerequisites: dance (DANC) major and DAN 17051 and special approval.

**17152 Ballet I-B (2)\***

(Repeatable for a total of 8 credit hours) Continuation of ballet techniques studied in DAN 17052 - Ballet I-A. Prerequisites: dance (DANC) major and DAN 17052 and special approval.

**27057 Dance for Children (3)\***

(Repeatable for a total of 6 hours) The theory and practice of children's dance in the preschool, elementary/middle schools, private studio and recreation settings. Prerequisite: dance (DANC) or early childhood education (ECED) major and special approval.

**27070 Introduction to Jazz Styles A (2)**

Development of basic jazz dance skills. Students must be at 2000-level technique in modern or ballet. Prerequisite: DAN 27071 or 27072; and special approval.

**27071 Modern Dance Technique II-A (3)\***

(Repeatable for a total of 12 hours) Intermediate modern dance styles emphasizing complex movement phrases. Prerequisite: DAN 17051 and special approval.

**27072 Ballet II-A (2)\***

(Repeatable for a total of 8 credit hours) Intermediate ballet technique. Prerequisites: dance (DANC) major and DAN 17152 and special approval.

**27074 Dance Composition I (3)\***

(Repeatable for a total of 12 hours) Movement exploration and improvisation, including developing the body as an instrument of expression. Prerequisite: DAN 17151 and special approval. Corequisite: DAN 27071.

**27076 Dance as an Art Form (3)**

Survey of the various types, styles and functions of dance with emphasis on understanding dance as an art form and an expression of culture. Prerequisite: none. This course may be used to satisfy the Liberal Education Requirements (LER) and diversity requirement.

**27170 Introduction to Jazz Styles B (2)**

Continued development of basic jazz dance skills. Prerequisite: DAN 27070 and special approval.

**27171 Modern Dance Technique II-B (3)\***

(Repeatable for a total of 12 hours) Continuation of intermediate-level dance styles with emphasis on complex movement phrases. Prerequisite: DAN 27071 and special approval.

**27172 Ballet II-B (2)\***

(Repeatable for a total of 8 hours) Continuation of intermediate ballet technique. Prerequisite: DAN 27072.

**27174 Dance Composition II: (2)\***

(Repeatable for a total of 8 credit hours) Basic principles of dance composition with attention to design, thematic material, structure, form and small groups. Prerequisite: DAN 27074 and special approval.

**37053 Principles of Dance Mechanics II (2)**

(Repeatable for a total of 16 credit hours) Continuation of DAN 17053. Prerequisite: DAN 17053 and special approval.

**37058 Methods and Materials of Dance (3)**

(Repeatable for a total of 6 credit hours) Theory and practice of teaching dance technique from middle school to adults with an emphasis on modern dance. Prerequisite: DAN 27057 and special approval.

**37067 Ballet III-A (2)**

(Repeatable for a total of 8 credit hours) Advanced ballet technique. Prerequisite: DAN 27172 and special approval.

**37068 Modern Dance Technique III-A (3)**

(Repeatable for a total of 15 credit hours) Advanced modern dance technique. Prerequisite: DAN 27171 and special approval.

**37070 Dance Composition III (2)**

(Repeatable for a total of 8 credit hours) Development of individual movement style through improvisational studies and movement manipulation exercises of structure and form resulting in a substantial solo modern dance work. Prerequisite: DAN 27174 and special approval.

\*Course ineligible to be repeated for GPA recalculation.

\*\*Courses offered only at Regional Campuses.

**37071 Movement Notation (2)**

Analyzing and recording human movement. The common aspects of movement in all forms of sports, dance and aquatics. Analysis and recording with the Labanotation System. Prerequisite: dance (DANC) major and special approval.

**37167 Ballet III-B (2)**

(Repeatable for a total of 8 credit hours) Continuation of advanced ballet technique. Prerequisite: DAN 37067 and special approval.

**37168 Modern Dance Technique III-B (3)**

(Repeatable for a total of 15 credit hours) Continuation of advanced modern dance technique. Prerequisite: DAN 37068 and special approval.

**37170 Dance Composition IV (1)**

(Repeatable for a total of 3 credit hours) Exploration of advanced composition skills in preparation for the B.F.A. Senior Choreography Project and future choreographic endeavors. Prerequisite: DAN 27174 and special approval.

**37192 Dance Practicum (1)**

(Repeatable for a total of 4 credit hours) Practical experience in cocurriculum dance activities under faculty supervision. S/U grading. Prerequisite: special approval.

**37271 Dance Ensemble (2)**

(Repeatable for a total of 16 credit hours) Participation in rehearsal, preparation and performance of public dance concerts in an established dance ensemble. Prerequisite: dance (DANC) major and special approval.

**47054 Modern Dance Technique IV-A (3)**

Advanced technique integrating previously learned modern dance techniques and developing advanced movement phrasing. Prerequisite: DAN 37168 and special approval.

**47055 Ballet IV-A (2)**

A continuation of DAN 37167 with increasing clarity and control of movements. Prerequisite: DAN 37167 and special approval.

**47060 Professional Aspects in Dance (2)**

(Repeatable for a total of 2 credit hours) Development of pragmatic skills for entrance into professional dance careers. Emphasis on résumé writing, preparation for auditions and economic survival. Prerequisite: DAN 27170 and special approval.

**47063 Dance History I (3)**

History of dance from antiquity to 1900. Prerequisite: dance (DANC) major and special approval.

**47070 Jazz Style-A (2)**

Jazz style for students with advanced dance technique. Prerequisite: DAN 27170 and special approval.

**47093 Variable Title Workshop in Dance (1-3)**

Offered for specific professional needs. Emphasis on performance workshops. S/U grading. Prerequisite: special approval.

**47095 Special Topics in Dance (1-3)**

(Repeatable for a total of 24 credit hours) Offered when resources permit a topic different from existing courses. Topic to be announced when scheduled. Prerequisite: dance (DANC) major.

**47154 Modern Dance Technique IV-B (3)**

Continuation of advanced technique integrating previously learned modern dance techniques and developing advanced movement phrasing with special emphasis on performing quality and movement range. Prerequisite: DAN 47054 and special approval.

**47155 Ballet IV-B (2)**

A continuation of DAN 47055 with increasing clarity and dynamic expression. Prerequisite: DAN 47055 and special approval.

**47156 Dance Production (3)**

Study of elements involved in planning and implementing a concert. Experiential work in technical and management components. Prerequisite: dance (DANC) major and special approval.

**47163 Dance History II (3)**

History of the development of concert and theatrical dance forms from 1900 to present day. Prerequisites: dance (DANC) major and DAN 47063 and special approval. This course may be used to satisfy the writing-intensive requirement with approval of major department.

**47170 Jazz Style-B (2)**

Continuation of DAN 47070. Prerequisite: DAN 47070 and special approval.

**47174 Senior Choreography Project (1)**

(Repeatable for a total of 2 credit hours) Creation of a modern dance work to be performed with full production values in an approved setting. Prerequisite: DAN 37170 and special approval.

**47192 Internship in Dance (1)**

(Repeatable up to 4 credit hours with different age and ability groups.) Supervised dance apprenticeship in an approved educational setting. Prerequisite: dance (DANC) major and special approval.

**47193** *Variable Title Workshop in Dance (1-3)*  
Selected topics of interest relating to dance. S/U grading. Prerequisite: junior standing and special approval.

**47196** *Individual Investigation in Dance (1-3)*  
(Repeated registration not to exceed 6 credit hours) Individual projects for dance majors. IP grade permissible. Prerequisites: junior standing and special approval.

**47525** *Student Teaching in Dance (9)*  
(Repeatable for a total of 18 credit hours) This experience provides for a full semester of student teaching in the broadest range of multiage school settings. S/U grading; IP grade permissible. Prerequisite: dance (DANC) major and admission to student teaching and DAN 47192 and special approval.

### EARLY CHILDHOOD EDUCATION (ECED)

**10120** *Introduction to Early Childhood Services (2)*

Orientation to the field of early childhood education: historical and present-day programs and services for young children ages 0-8. Prerequisite: none.

**20163** *Understanding Young Children: Typical and Atypical Pathways (3)*

Growth and development of young children from birth to age 8 as it occurs along both typical and atypical pathways. Corequisites: ECED 30134 and 30147 and 30164 and SPED 23000 and admission to advanced study.

**30123** *Language and Literacy for the Preschool Child (3)*

An examination of the process of language and literacy development in preschool children. The course focuses on how preschool teachers integrate knowledge of development with early school and family literacy learning. Prerequisites: ECED 30142 and 40145 and 40165 and 40192 and admission to advanced study.

**30134** *Integrated Expressive Arts and Social Studies in Preschool (3)*

Young children's development in the expressive arts and social studies; implications for development of the environment, integrated curriculum and teaching methods for preschool children. Corequisites: ECED 20163 and 30147 and 30164 and SPED 23000 and admission to advanced study. Special fee: \$15 flat fee—subject to change.

**30142** *Partnerships and Guidance for Preschool Children (3)*

Appropriate guidance strategies set the foundation for positive experiences our youngest children in school; patterns learned early often set a foundation for primary school entry. This course addresses the concerns of guidance, family partnerships and inclusive schooling with preschool children and their educators. It takes a proactive stance helping teachers develop a constructive guidance approach. Prerequisite: ECED 30123 and 40145 and 40165 and 40192 and admission to advanced study.

**30144** *Integrated Curriculum for Social Studies (3)*

Objectives, resources, curriculum development, methods of teaching social studies and expressive arts at kindergarten and primary levels; emphasis on developing integrated social studies curriculum; infusing multiple forms of expressive arts into integrated curriculum and assessment; and engaging professional collaboration with teachers in the field. Prerequisites: ECED 30134 and admission to advanced study. Corequisites: ECED 40114 and 40126 and 40127 and 40128 and 40147.

**30147** *Early Experiences in Mathematics and Science (3)*

Instructional psychology and materials for effective teaching of mathematics and science in preschool settings with a theoretical emphasis on cognitive development. Prerequisite: minimum C (2.0) in MATH 14001 and 14002 and admission to advanced study. Corequisites: ECED 20163 and 30134 and 30164 and SPED 23000. Special fee: \$15 flat fee—subject to change.

**30164** *Preschool Education (3)*

Integrated curriculum utilizing principles of developmentally appropriate practice in settings for children under age 5. Field experience two mornings a week. Corequisites: ECED 20163 and 30134 and 30147 and SPED 23000 and admission to advanced study.

**40093** *Variable Title Workshop in Early Childhood Education (1-5)*

Topics of special interest to students desiring to intensify their knowledge in particular areas. Presenters include Kent State early childhood faculty members and may include experts from outside agencies and other institutions. S/U grading. Prerequisite: special approval.

**40105** *Appropriate Phonics Instruction for Kindergarten and Primary Children (3)*

An examination of phonics in early reading and writing development, effective strategies for teaching and assessing phonics appropriate for kindergarten and primary grade children. Corequisites: ECED 40107 and 40142 and 40151 and EDPF 29535 and admission to advanced study.

**40107** *Teaching Mathematics: Early Years I (3)*  
Instructional psychology and materials for effective teaching of mathematics in grades K-1 with a theoretical emphasis on cognitive development. Prerequisites: ECED 30147 and MATH 14001 and 14002 and admission to advanced study. Corequisites: ECED 40105 and 40142 and 40151 and EDPF 29535.

**40114** *Teaching Science in the Early Years (3)*

This course investigates engaging young children in inquiry-based processes of science. Emphasis is given to creating developmentally appropriate experiences in accordance to NAEYC guidelines. National and state science standards, as well as the college and graduate school of education conceptual framework. Attention is focused on the use of science materials, safety, planning, assessment and incorporating science across the curriculum. Prerequisite: ECED 30147 and admission to advanced study. Corequisites: ECED 30144 and 40126 and 40127 and 40128 and 40147. Special fee: \$15 flat fee—subject to change.

**40125** *Inquiry into Professional Practice (3)*

Interdisciplinary inquiry into teaching as a professional practice in ECED; emphasis on teacher as researcher. Utilization of teaching/learning technologies. Prerequisite: admission to advanced study.

**40126** *Developmental Reading and Writing: Early Years (3)*

This course builds on work begun in ECED 40105. It explores how teachers support primary children's literacy development through small group strategic instruction based on formative assessments. Pre-service teachers will also learn how to implement a process approach to writing instruction. Prerequisite: ECED 40105 and admission to advanced study. Corequisites: ECED 40127 and 30144 and 40114 and 40147. Course may be used to satisfy the writing-intensive requirement with approval of major department.

**40127** *Developing a Balanced Literacy Program (3)*

This course expands on the previous three literacy courses to explore how research-based instruction requires a balance of literacy learning formats, an integration with learning in the content areas and is based on assessment of individual children's reading and writing abilities. Prerequisite: ECED 40105 and admission to advanced study. Corequisites: ECED 40126 and 30144 and 40114 and 40128.

**40128** *Integrated Field Experiences (3)*

Participation in experiences offering opportunity to plan and teach reading, language arts, integrated content units and observe students in early childhood classrooms. Corequisites: ECED 30144 and 40114 and 40126 and 40127 and 40147 and admission to advanced study.

**40142 Home-School-Community-Partnerships in Diverse Contexts (3)**

Approaches to parent and community involvement in the education and welfare of children are examined, applied and discussed. Focuses are theories, policies, practices, skills and knowledges of partnership building in educational settings. An emphasis on differentiation of practices for diverse communities is applied to teaching and learning in the primary grades. Prerequisites: advanced study and special approval.

**40145 Music and Rhythms in Preprimary Education (3)**

Music and rhythms for preprimary children. Optional course intended for majors in early childhood education or other persons desiring additional work with preprimary children. Corequisites: ECED 30123 and 30142 and 40165 and 40192 and admission to advanced study.

**40146 Teaching with Microcomputers: Early Years (3)**

Developing competency in teaching with microcomputers in pre-kindergarten through grade three. Includes lab experience in computerized lessons and programming in Logo. Prerequisite: ITEC 47427 and admission to advanced study.

**40147 Teaching Mathematics: Early Years II (3)**

Instructional psychology and materials for effective teaching of mathematics in grades K-3 with a theoretical emphasis on cognitive development. Prerequisites: C (2.0) or better in MATH 14001 and 14002 and admission to advanced study. Corequisites: ECED 30144 and 40114 and 40126 and 40127 and 40128. Special fee: \$10 flat fee—subject to change.

**40151 Guidance of Young Children (3)**

Principles and practices of appropriate guidance for young children, intervention strategies, resources and materials for guidance. Corequisites: ECED 40105 and 40107 and 40142 and EDPF 29535 and admission to advanced study.

**40165 Integrated Application of Preschool Curriculum (3)**

Internship in preschool. Advanced integrated preschool curriculum utilizing principles of developmentally appropriate practice focusing on infant, toddler and preschool-age children. Prerequisites: ECED 30164 and admission to advanced study. Corequisites: ECED 30123 and 30142 and 40145 and 40192.

**40192 Internship in Preschool (6-12)**

Internship in preschool settings, full day for 16 weeks. S/U grading. Prerequisite: ECED 30164 and admission to advanced study. Corequisites: ECED 30123 and 30142 and 40145 and 40165.

**40196 Individual Investigation in Early Childhood Education (1-5)**

Open to seniors in ECED. Intensive individual study on an early childhood topic selected by student and advisor. Prerequisite: special approval and admission to advanced study.

**40292 Internship in Kindergarten/Primary (6-12)**

Internship in grades K-3, full day for 16 weeks. S/U grading. Corequisite: ECED 40125 and admission to advanced study.

**EARLY CHILDHOOD EDUCATION TECHNOLOGY (ECET)\*\***

**21005 Partnerships in Child Guidance (3)**

The course foundation is the understanding that children are a part of a family, culture and community. Students gain knowledge and skills to implement developmentally appropriate child guidance strategies and learn cross-cultural communication skills. 12 field experience hours required. Prerequisites: ECED 10120 and ECED 20163.

**21010 Infant/Toddler Curriculum and Services (3)**

Infant/toddler development, environments and curriculum; theoretical perspectives; family involvement; community involvement; community resources, collaboration and advocacy, 38 hours of field experience required. Prerequisites: ECED 10120 and 20163.

**21095 Special Topics in Early Childhood Education Technology (1-3)\***

Intensive study of significant current issues in the early childhood education field. Prerequisite: departmental special approval.

**21096 Individual Investigation in Early Childhood Education Technology (1-3)\***

(Repeatable for a total of 6 credit hours) Analysis and special research in the early childhood education field. Prerequisite: departmental special approval.

**22000 Preschool Curriculum (3)**

Preschoolers' development, environments and curriculum; theoretical perspectives; family involvement; community resources, collaboration and advocacy. 38 hours of field experience required. Prerequisites: ECET 21010 and ECED 20163.

**22130 Emerging Literacy (3)**

Theoretical and practical issues in acquisition and development of literacy. Developmentally appropriate instructional practices, integration across the curriculum, individual differences and assessment are addressed. Field hours required. Prerequisites: ECED 10120 and 20163.

**22140 Student Teaching Seminar (3)**

A reflective approach to make student teaching experience more valuable. Students develop and implement developmentally appropriate curriculum and assessment for young children, prepare a professional development plan and develop a professional portfolio. Corequisites: ECET 22150; departmental special approval.

**22150 Student Teaching (6)**

Student will spend 300 hours at an approved preschool program under the supervision of an ECET/ECED faculty member. S/U grading; IP grade permissible. Corequisites: ECET 22140; departmental special approval.

**ECONOMICS (ECON)**

**12060 Personal Finance (3)**

Examines economic issues and problems of everyday life. Goal is to enable individuals to analyze their personal finances in order to learn how to get the most out of their income, increase income through a better understanding of possible investments and protect what they have through selecting appropriate insurance. Topics covered include budgeting and financial planning, federal income taxes, insurance, borrowing, and investment principles and strategies. Prerequisite: none.

**22060 Principles of Microeconomics (3)**

Principles and policies affecting prices, including factor incomes, under alternative market structures. Tools developed to examine social problems, including poverty, crime, pollution and international relations. Prerequisite: MATH 10005 or 10034 or 10035 or 10036 or 11010 or 11011 or appropriate test score(s). This course may be used to satisfy the Liberal Education Requirements (LER).

**22061 Principles of Macroeconomics (3)**

Principles and policies affecting aggregate production, consumption, investment and government expenditures. Includes role of money, the banking system, inflation, unemployment and economic growth. Prerequisite: ECON 22060. This course may be used to satisfy the Liberal Education Requirements (LER).

**32025 Money, Credit and Banking (3)**

Organization of our money, credit and banking system; principles and problems of monetary policy. Not open to students who have completed ECON 32030. Prerequisites: ECON 22060 and 22061.

\*Course ineligible to be repeated for GPA recalculation.  
\*\*Courses offered only at Regional Campuses.

**32030 International Money, Credit and Banking (3)**

Organization and conduct of international money, credit and banking systems. Principles and problems of monetary policy. The financial systems in the United States and in other countries and the role of international organizations such as the International Monetary Fund, World Trade Organization and World Bank are studied. Not open to students who have completed ECON 32025. Prerequisites: ECON 22060 and 22061.

**32040 Intermediate Microeconomic Theory and Applications (3)**

The study of individual choices under conditions of relative scarcity and their consequences for prices; and the allocation of resources in the economic system. Develops the analytical and theoretical tools pertinent in determining how scarce resources are allocated among competing wants and demonstrates how these tools are used in real-world applications. Prerequisites: ECON 22060 and 22061.

**32041 Intermediate Macroeconomic Theory and Policy (3)**

Analysis of how an economy such as the United States operates from an aggregate perspective. The determination for the level of income, employment, inflation, international trade and economic growth is analyzed. Discussion of monetary and fiscal policies. Prerequisites: ECON 22060 and 22061.

**32050 Applied Econometrics (3)**

Application of econometric methods such as regression analysis to a variety of economic questions. Prerequisites: MATH 11012 or 12002; and ECON 22060 and 22061 and MIS 24056.

**32070 Labor Problems (3)**

Surveys of the major institutions, features and functioning of the labor market, as well as some of its outstanding problems. Does not count toward economics major or minor. Not open to students who have completed ECON 42072. Prerequisites: ECON 22060 and 22061.

**32075 Introduction to International Trade (3)**

Introduction to fundamental principles and problems of international trade. Covers comparative advantage, government policies affecting trade, free trade vs. protection, international institutions and exchange rates. Offered only in the Geneva program. Prerequisite: ECON 22061.

**32082 Introduction to Managerial Economics (3)**

Combines economic theory and quantitative analysis to develop resource-allocation decision-making skills which enable managers to evaluate problems, identify possible solutions and finally implement and monitor the best alternative to accomplish their stated objectives. Covers such topics as supply and demand, consumer theory, production, costs, contracts, game theory and principal-agent problems, as well as the basic economic models of perfect competition, oligopoly, monopolistic competition and monopoly. Prerequisite: ECON 22060. Cannot be taken by economics majors. Not open to students who have completed ECON 32040.

**32083 The Economics of Poverty (3)**

Nature and causes of poverty in United States. Analysis of impact of poverty upon economy and study of measures both real and potential for alleviating it. Prerequisite: ECON 22060. This course may be used to satisfy the diversity requirement.

**32084 Economics of the Environment (3)**

Examines economic theory of environmental and resource economics in a fashion that is understandable by students with varied backgrounds in economics. Emphasis on microeconomic theory and its application to environmental issues. Topics covered include: "market failure" and its impact on the environment; cost-benefit analysis; and input-output analysis. Designed for those interested in the environment or who may be planning careers in environmental or natural sciences. Prerequisite: ECON 22060.

**32086 Economics of Education (3)**

Economic aspects of primary, secondary and higher education. Returns examined with respect to individuals and society. Covers educational finance and efficient production of education. Prerequisite: ECON 22060.

**42040 Introduction to Econometrics (3)**

Application of economic models, probability distributions, estimation, estimators and regression and correlation as tools in economic analysis. Prerequisites: MATH 11012 and ECON 32040 and 32041.

**42045 Mathematical Economics (3)**

Systematic exposition of mathematical techniques and their application to economic analysis. Among topics that may be covered: sets; relations/functions; matrix algebra; differentiable and integral calculus; and optimization techniques. Prerequisites: ECON 32040 and 32041.

**42065 Problems of Monetary and Fiscal Policy (3)**

Analysis of objectives, techniques and economic effects of monetary and fiscal policies. Prerequisites: ECON 32025 and 32041.

**42068 Industrial Organization and Public Policy (3)**

Theoretical, empirical and critical examination of structure; operation and performance of industrial markets in American economy. Prerequisite: ECON 32040.

**42072 Economics of Labor Markets (3)**

The economic analysis of the decisions of workers and firms in determination of wages and employment. Topics include labor supply decisions, marginal productivity theory, discrimination, demand for education, effects of trade unions. Prerequisite: ECON 32040.

**42075 International Economic Relations (3)**

Principles, problems and policies of international economic relations, with extensive references to the United States, Western Europe, Latin America and former communist countries. Covers international aspects of interdependency, cooperation and multinational institutions. Prerequisites: ECON 22060 and 22061.

**42076 Economic Development (3)**

Analysis of nature of significance of barriers to and future potential for economic development of a nation. Special emphasis on theories and strategic factors pertaining to economic growth. Prerequisites: ECON 22060 and 22061.

**42078 Economic History of Technological and Industrial Development (3)**

Historical survey of major economic and technological developments in Western countries from the middle ages to the 20th century. Prerequisites: ECON 22060 and 22061 or special approval of instructor.

**42080 Regional Economics (3)**

Examines techniques of regional economic analysis to promote understanding of interregional disparities in developed nations and suggests policy alternatives for alleviating problems arising from disparities. Prerequisites: ECON 22060 and 22061.

**42081 Urban Economics (3)**

Application of economic principles to urban spatial patterns, economic development and public policy in housing, transportation, pollution, welfare, etc. Prerequisites: ECON 22060 and 22061.

**42083 History of Economic Thought (3)**

Economic thought from Mercantilist Period to early 20th century, especially emphasizing theories of Classical School, Marginalists, Marx and neoclassicists. Prerequisite: 12 credit hours of economics (ECON).

**42085 Public Finance (3)**

Examination of public expenditure and taxation policies including the theory of public goods, collective decision making, cost-benefit analysis, equity and efficiency aspects of taxation and current government policy issues. Prerequisite: ECON 22060.

**42086 Economics of Health Care (3)**

Overall objective is to use economic analysis to understand and evaluate what has happened and is happening to the health care profession as well as current health care policies under consideration. Topics include issues such as Medicare, health care reform, HMOs and increasing costs in health care. Prerequisite: ECON 22060.

**42087 Law and Economics (3)**

A study of the economic foundations of the legal system and the impact of legal systems on market behavior. Prerequisites: ECON 22060 and 22061 or special approval of instructor.

**42191 Senior Seminar in Economics (3)**

Advanced investigation of selected topics in economic analysis and issues in economic policy. Prerequisites: ECON 32050 or MATH 40012; and ECON 32040 and 32041. This course may be used to satisfy the writing-intensive requirement with approval of major department.

**42291 Variable Content Seminar in Economics (1-4)**

(Repeated registration permissible when topic varies; repeatable for a total of 12 credit hours) Various special seminars will be announced in the *Schedule of Classes* under this course number. Prerequisite: special approval.

**42292 Internship in Economics (3)**

Supervised practical experience in economics. Eligibility requirements available from the internship coordinator. Does not count toward economics major. May count as business elective. S/U grading; IP grade permissible. Prerequisites: economics (ECON) major and junior standing and special approval.

**42293 Variable Topic Workshop in Economics (1-6)**

(Repeated registration permissible when topic varies; repeatable for a total of 18 credit hours) Various special workshops will be announced in the *Schedule of Classes* under this course number. S/U grading. Prerequisite: special approval.

**42295 Special Topics in Economics (3)**

(Repeated registration permissible when topic varies; repeatable for a total of 9 credit hours) Various special topics will be announced in the *Schedule of Classes* under this course number. Prerequisite: special approval.

\*Course ineligible to be repeated for GPA recalculation.

\*\*Courses offered only at Regional Campuses.

**42296 Individual Investigation in Economics (1-3)**

Independent study done under the supervision of a faculty member. Written approval of supervising faculty member and department chair required prior to registration. IP grade permissible. Prerequisites: senior economics major; special approval.

**42297 Variable Topic Colloquium in Economics (1-3)**

(Repeated registration permissible when topic varies; repeatable for a total of 9 credit hours) Various special colloquia will be announced in the *Schedule of Classes* under this number. Prerequisite: special approval.

**42298 Research in Economics (1-6)**

Research project done under the supervision of a faculty member. Written approval of supervising faculty member and department chair required prior to registration. IP grade permissible. Prerequisites: senior standing and economics (ECON) major and special approval.

**42299 Senior Project (1-3)**

Thesis or independent study project done under the supervision of a faculty member. Written approval of supervising faculty member and department chair required prior to registration. IP grade permissible. Prerequisite: senior standing and economics (ECON) major.

**EDUCATION (EDUC)****49525 Inquiry Professional Practice in Health/Physical Education (3)**

Seminar focused on development of those skills and knowledge which enable future teachers to engage in effective reflective/collaborative/ethical professional practice. Final semester of four. Utilization of teaching/learning tech. Corequisite: EDUC 49526. Prerequisite: EDPF 29535.

**49526 Student Teaching in Health and Physical Education (12)**

Full-time student teaching which includes a balanced experience in elementary and secondary health and physical education. Corequisite: EDUC 49525. Prerequisite: EDPF 29535 and ITEC 19525.

**EDUCATIONAL ADMINISTRATION (EDAD)****40093 Variable Title Workshop in EDAD (1-5)**

S/U grading. Prerequisite: none.

**46525 Careers in Higher Education Administration and Student Personnel (3)**

Familiarize students with the history of higher education; philosophies of higher education; financial, legal and political issues facing higher education; and the careers available in colleges and universities. Prerequisite: none.

**EDUCATIONAL PSYCHOLOGY AND FOUNDATIONS (EDPF)****20091 Preprofessional Seminar in Educational Studies (2-4)\***

Introduction to the nature and scope of educational service delivery across settings and to the social and cultural foundations of educational policies and programs. Open to any university student and to those considering alternative careers in education. Prerequisite: none.

**29525 Educational Psychology (3)**

Examines major theories of human development and learning, motivation, instructional strategies, assessment; similarities and differences in learners. The role of factors in the students' learning and development is considered. Pre/corequisite: minimum grade of C (2.0) in EDPF 29535 ;and earth science (ESCI), integrated language arts (INLA), integrated mathematics (IMTH), integrated science (ISCI), integrated social studies (INSS), life science (LFSC), life science chemistry (LSCM), physical science (PHSC), school health education (SHED), early childhood education (ECED), middle childhood education (MCED), gifted (GFTD), intervention specialist (INSP), integrated business education (IBED), family and consumer sciences education (FCSE), marketing education (MKT), art education (ARTE), music education (MUED) or early childhood education technology (ECT) major

**29535 Education in a Democratic Society (3)**

Utilize readings, explore themes, broadly explore purposes of school in society and what knowledge, dispositions and performances are necessary to be a successful teacher today. Prerequisite: none.

**32139 Introduction to the Philosophy of Education (2)**

An introduction to the philosophical analysis of educational problems focusing on the goals of education and the school's role in achieving these goals. Prerequisite: junior standing.

**39595 Special Topics in Cultural Foundations (2-4)**

Directed reading and/or research of special interest or need to small groups of students in cultural foundations. Planned with and directed by a faculty member. IP grade permissible. Prerequisite: none.

**39596 Individual Investigation in Cultural Foundations (1-3)**

Directed independent reading and/or research of special interest or need in student program. Planned with and directed by a faculty member. IP grade permissible. Prerequisite: special approval.

**40093 Variable Title Workshop in Educational Foundations (1-4)**

Variable topics; designed to respond to specialized needs of various groups within the context of trends, issues and problems in the educational foundations disciplines. S/U grading. Prerequisite: special approval.

**42150 Educational Dimensions of Leisure, Retirement and Aging (3)**

An intensive inquiry into leisure and its potential for more fully optimizing development, and implications for educational practice both in school and nonschool settings. Prerequisite: junior standing or special approval of instructor.

**49570 Social Foundations of Multicultural Education (3)**

Analysis of historical, social and ideological forces which relate to current educational policies and practices in multicultural education. School and nonschool education programs will be analyzed. Prerequisite: junior standing.

**ELECTRICAL/ELECTRONIC AND RELATED ENGINEERING TECHNOLOGIES (EERT)\*\***

**12000 Electric Circuits I (4)**

Direct current circuit analysis involving current and voltage, resistance, energy and power, Ohm's law, series and parallel networks. Mesh and nodal analysis, network theorems and DC instruments. Corequisite: MATH 11011.

**12001 Electric Circuits II (3)**

Analysis of capacitive, inductance and magnetic circuits and transients in R-L-C combinations. AC network analysis: mesh and nodal, phasor algebra, power factor, resonance. Corequisite: MATH 19002. Prerequisite: EERT 12000.

**12005 Electrical/Electronic Drawing (2)**

Electrical/electronic drawing techniques using computer-aided design emphasizing schematic, block and wiring diagrams. Either printed circuit or power layout is covered as needed. Prerequisite: none.

**12010 Introduction to Electronics (3)**

Semiconductor theory. Properties and applications of PN junctions and bipolar junction transistors and their use in simple circuits. Prerequisite: EERT 12000.

**21010 Engineering and Professional Ethics (3)**

Application of codes of ethics in the engineering and technology profession reflective of social and moral responsibilities to the public and accountability in engineering practice. Prerequisite: none.

**21096 Individual Investigation in Electrical/Engineering Technology (1-4)\***

Independent, in-depth research of an electrical/electronic engineering technology topic supervised and coordinated by an engineering technology faculty member. Prerequisite: special approval.

**22000 Electricity/Electronics with Applications (3)**

Basic electronics theory and fundamental concepts of electrical/electronic and digital circuits with applications in the various fields of engineering. Prerequisite: none.

**22001 Power Systems (3)**

Practical study of power distribution from generator to user. Prerequisite: sophomore standing.

**22002 Industrial Controls (3)**

Introduction to control of AC and DC machinery by electromechanical and solid state devices. Study of circuits, troubleshooting methods and logic systems. Prerequisites: EERT 12010 or 22000 and special approval.

**22003 Technical Computing (3)**

An introduction to digital computer systems, flow-chart techniques, programming using a scientific high-level language with applications. Number system conversions, binary codes, error detection and correction. Boolean algebra. Corequisite: MATH 19001.

**22004 Digital Systems (3)**

Modern integrated digital logic families. Analysis and design of digital circuits such as gates, multivibrators, comparators, counters including interface, control memory and computer circuits. Programmable logic controllers. Prerequisite: EERT 22003.

**22005 Instrumentation (3)**

Introduction to modern instrument techniques, includes signal to noise enhancement, active filters, phase locked loops, lock-in-amplifiers, box car integrators, averages and correlator. Prerequisite: EERT 12010.

**22006 Electrical Machines (3)**

Introduction to transformer action, losses and efficiency. Fundamentals of DC and AC motors and generators and three phase systems. Prerequisite: EERT 12001.

**22007 Industrial Motor Control and Application (3)**

Application and use of DC, single and polyphase electric motors and industrial control systems. Construction, troubleshooting and operation of starting systems is emphasized. Prerequisite: EERT 22000.

**22011 Electronic Systems (3)**

Continuation of EERT 12010. Study of field effect transistors, frequency effects, Miller's Theorem, decibel notation and negative feedback. Prerequisite: EERT 12010.

**22013 Industrial Electronics (3)**

Solid state devices used in industry, emphasizing thyristors, thyatron, relaxation oscillators, timing circuits, solid state switches and power supply regulation. Prerequisite: EERT 12010 or 22002.

**22014 Microprocessors and Robotics (4)**

An introduction to microprocessor system fundamentals, software and hardware, architecture and instruction set, with applications to robot systems motor control, speech and sensor programming. Prerequisite: EERT 22003.

**22015 Robotics and Advanced Microsystems (3)**

An advanced course in microprocessor software and hardware. Input/output devices and interfacing with applications to robotics. Troubleshooting and design of microprocessor controlled systems. Prerequisite: EERT 22014.

**22016 Productivity Software for Industry (1)**

A lab course introducing students to the use of computers for word processing, spreadsheets and database management applications. Students will receive hands-on training on the use of the software applicable to engineering problems using hands-on workshop formats. S/U grading; IP grade permissible. Prerequisite: none.

**22017 Applied Engineering Software (3)**

A course on the use of the computer as a problem-solving tool for applications in engineering and manufacturing. Emphasis is on the use of productivity software training on the use of the software applicable to engineering problems using hands-on workshop formats. Prerequisite: EERT 22003.

**22018 PC/Network Engineering and Troubleshooting (3)**

A course covering the service, maintenance, upgrade and optimization of personal computers. Specification, installation and maintenance of local area networks will be covered. Students will learn communication protocols and network architecture. Two lectures and two labs. Prerequisite: EERT 22014.

**22020 Telecommunications Systems I (3)**

Television communications circuits and systems including basic systems, scanning systems, video amplification and processing, color television systems and receivers. Prerequisite: none.

**22095 Special Topics (1-3)\***

(Repeated registration permissible) Special topics in electrical/electronic engineering technology. Prerequisite: special approval.

**23000 Sensors (2)**

A study of sensors, transducers, relays, solenoids, servomotors, actuators, lasers, LEDs, photonic and temperature sensors and electronic devices in electromechanical control. Prerequisite: sophomore.

**ENGINEERING OF INFORMATION TECHNOLOGY (EIRT)****22030 Survey of Information Technology (3)**

An introductory course in modern methods and techniques used for information acquisition, processing, storage, conversion, transmission and display. Prerequisite: none.

**22032 PC Network Engineering II (3)**

A course dealing with the network concepts and methodologies, implementation, monitoring, performance evaluation, service, optimization and control of modern network systems. Two hours lecture and two hours lab. Prerequisite: EERT 22018.

**22033 Fiber Optics Technology (2)**

A course in the concepts and application of fiber-optic technology to industrial, medical, local area networks and digital communication systems. One hour lecture and two hours lab. Prerequisites: MATH 19002 and EERT 12001.

**ENGLISH (ENG)**

*For placement in College English courses see Arts and Sciences—English Composition Requirement — Placement.*

**10101 College English I for Foreign Students (3)**

Basic expository essay for non-native students. Emphasis on selection and organization of material, rhetorical patterns, clear and effective expression. Grammar and mechanics as needed. Prerequisite: grade of C (2.0) or better in ENG 10205 and special approval.

*Students who earn A (4.0) or B (3.0) in ENG 11011 are allowed to take lower-division (20000-level) English courses while also taking ENG 21011. Any undergraduate English course may be taken after ENG 21011 has been completed satisfactorily with the exception of 40000-level courses, which require junior standing.*

**10201 Elementary ESL Writing II (3)**

Writing proficiency in English established through enhancing knowledge of paragraph structure and development. Prerequisite: special approval.

**10202 Intermediate ESL Writing I (3)**

Introduction to the requirements of academic writing. Students will be introduced to the process model of writing, constructing a summary, paraphrasing and academic essay structure. Prerequisite: grade of C (2.0) or better in ENG 10201 and special approval.

**10203 Intermediate ESL Writing II (3)**

Use of the short academic essay to narrate a sequence of events, express an opinion or communicate an idea. Continued instruction in the writing process, academic summary and paraphrase for the ESL writer. Prerequisite: grade of C (2.0) or better in ENG 10202 and special approval.

**10204 Advanced ESL Writing I (3)**

Expanded understanding of the form and requirements of the academic essay. Acquisition of rhetorical modes of development for the ESL writer. Continued instruction in writing process model and academic summary. Prerequisite: grade of C (2.0) or better in ENG 10203 and special approval.

**10205 Advanced ESL Writing II (3)**

Course concentrates on how to interpret, respond to and incorporate outside sources into the academic essay. Continued instruction in the acquisition of rhetorical modes of development for the ESL writer. Prerequisite: grade of C (2.0) or better in ENG 10204 and special approval.

**10211 Elementary ESL Speaking and Vocabulary II (4)**

Course develops basic speaking and comprehension skills and builds vocabulary for survival purposes. An integrated skills course with an emphasis on speaking and vocabulary development in various situations and contexts. Prerequisite: special approval.

**10212 Intermediate ESL Speaking and Vocabulary I (4)**

Based on an integrated skills approach, this course moves students' language use beyond survival English to levels of sustained conversation in a variety of contexts. Prerequisite: appropriate placement test score or ENG 10211 with minimum C (2.0) grade.

**10213 Intermediate ESL Speaking and Vocabulary II (4)**

Based on an integrated-skills approach, this course features communicative activities with complex language structures and introduces abstract vocabulary. Other language skills support the development of speaking and vocabulary skills. Prerequisite: grade of C (2.0) or better in ENG 10212 and special approval.

**10214 Advanced ESL Speaking and Vocabulary I (3)**

While all skills are integrated into this course, it focuses on building skills for sustained discourse in complex topics, issues and concepts. Emphasis is on vocabulary and speaking skills, planning events, presentations and discussions. Prerequisite: grade of C (2.0) or better in ENG 10213 and special approval.

**10215 Advanced ESL Speaking and Vocabulary II (3)**

Course develops advanced speaking skills to engage students in complex communicative activities, both real and simulated, with an emphasis on language for academic and professional use. Continues to develop sophisticated vocabulary. Prerequisite: grade of C (2.0) or better in ENG 10214 and special approval.

**10216 Advanced ESL Speaking and Vocabulary III (2)**

Course strengthens existing high levels of oral language skills for consistent and sustained use in professional and academic settings and various other contexts. Prerequisite: special approval.

**10221 Elementary ESL Reading II (3)**

An introduction to reading strategies and skills needed when encountering authentic reading materials. Taught as an integrated skills approach course emphasizing engagement in contextualized and communicative activities. Prerequisite: special approval.

**10222 Intermediate ESL Reading I (3)**

Develops intermediate reading strategies and skills needed when encountering authentic reading materials. Taught as an integrated skills approach course emphasizing engagement in contextualized and communicative activities. Prerequisite: grade of C (2.0) or better in ENG 10221 and special approval.

**10223 Intermediate ESL Reading II (3)**

Continued development of and practice in intermediate reading strategies and skills using a variety of cultural materials. Instruction emphasizes integrated skills approach and involvement in communicative activities. Prerequisite: grade of C (2.0) or better in ENG 10222 and special approval.

\*Course ineligible to be repeated for GPA recalculation.

\*\*Courses offered only at Regional Campuses.

**10224 Advanced ESL Reading I (3)**

Builds low-advanced reading strategies and skills using a variety of text types. This course features an integrated skills approach and engages students in a number of communicative activities. Prerequisite: special approval.

**10225 Advanced ESL Reading II (3)**

Further advances reading strategies and skills necessary for understanding academic texts. This course features an integrated skills approach and focuses on contextualized and communicative activities. Prerequisite: grade of C (2.0) or better in ENG 10224 and special approval.

**10231 Elementary ESL Listening II (1)**

Examination of and practice in basic listening strategies. Practice listening to typical speech, short texts and dialog. Practice, relate and apply strategies to life on campus. Prerequisite: special approval.

**10232 Intermediate ESL Listening I (1)**

Practice in listening strategies for intermediate-level students. Practice, apply and relate listening skills to life at an American university. Prerequisite: grade of C (2.0) or better in ENG 10231 and special approval.

**10233 Intermediate ESL Listening II (3)**

Continued practice of intermediate-level listening strategies. Includes practice in listening to colloquial English, longer dialogs and authentic texts for main ideas and specific details, and compensating for listening difficulties. Prerequisite: grade of C (2.0) or better in ENG 10232 and special approval.

**10234 Advanced ESL Listening I (2)**

Examination and practice in listening strategies for low-advanced students. Includes practice in listening to authentic texts, including TV, radio, news and university lectures. Prerequisite: grade of C (2.0) or better in ENG 10233 and special approval.

**10235 Advanced ESL Listening II (2)**

Practice with listening strategies for advanced students. Includes practice in listening to authentic English texts, understanding schemata, using top-down and bottom-up strategies, TV news, notetaking skills and university lectures. Prerequisite: grade of C (2.0) or better in ENG 10234 and special approval.

**10241 Elementary ESL Grammar II (3)**

An introductory-level course on basic grammar. Introduces fundamental rules of usage, parts of speech, sentence structure, questions, short answers, negations and functions of simple and continuous verb tenses. Prerequisite: special approval.

**10242 Intermediate ESL Grammar I (3)**

A low- to intermediate-level course on grammar which includes an examination of form and function, an expansion on verb tenses and an introduction to modals, passive voice and reported speech. Prerequisite: grade of C (2.0) or better in ENG 10241 and special approval.

**10243 Intermediate ESL Grammar II (3)**

An intermediate-level course with a contextual approach to English grammar to develop students' knowledge of syntactic structures, verb tenses, modifier form and function, nouns and dependent clauses. Prerequisite: grade of C (2.0) or better in ENG 10242 and special approval.

**10244 Advanced ESL Grammar I (3)**

Contributes to building academic language skills, this course reviews verbal aspect, tense, modality, sentence patterns, the passive voice, reported speech, forms expressing contrast, cause and effect and conditional and introduces verbal forms. Prerequisite: grade of C (2.0) or better in ENG 10243 and special approval.

**10245 Advanced ESL Grammar II (3)**

Continued development of skills necessary for academic performance. Identifying, analyzing and paraphrasing of structures occurring in academic settings, including verb types and sentence patterns, clause reduction, cause and effect and conditional. Prerequisite: grade of C (2.0) or better in ENG 10244 and special approval.

**10250 ESL Pronunciation (1)**

Based on a diagnostic test, course focuses on stress, intonation, weak/strong forms and adequate pronunciation of sounds for effective meaning transfer and comprehension. Prerequisite: none.

**10261 ESL: Introduction to American Literature I (3)**

Develops an understanding of a variety of American literary forms, including oral tradition, fables, myths, folk tales and their types, songs and films. Explores the cultural diversity of North America through the stories of its people. Prerequisite: special approval.

**10262 ESL: Introduction to American Literature II (3)**

Utilizes short stories, plays and poems as textual sources to build toward a critical understanding of literary genres within the ethnically diverse nature of American literature. Prerequisite: grade of C (2.0) or better in ENG 10261 and special approval.

**10263 ESL: Introduction to Children's Literature (3)**

An introductory survey of classic and contemporary children's literature, pre-K through 7. Provides an analysis of various genres. Includes a crosscultural overview of the history, development and criticism of children's literature. Prerequisite: grade of C (2.0) or better in ENG 10262 and special approval.

**10264 ESL: Introduction to Adolescent Literature (3)**

An introductory survey of classic and contemporary adolescent and young adult literature (grades 7-12). Provides an overview of genre. Addresses developmental stages of young adulthood as a guideline for working with learners across cultures. Prerequisite: grade of C (2.0) or better in ENG 10262 and special approval.

**10266 ESL: Introduction to the Culture of North America (3)**

A content-based course which examines core American values and beliefs. Introduces topics such as family, education, religion, government, violence and diversity. Prerequisite: special approval.

**10267 ESL: American Institutions (3)**

Course emphasizes core American values and beliefs. Includes topics such as family, education, religion, government, violence, diversity. Discusses concepts of cultural norms, amalgamation, assimilation, pluralism and ethnocentrism. Prerequisite: grade of C (2.0) or better in ENG 10266 and special approval.

**10268 ESL: Images and Icons in TV, Film and Technology (3)**

Explores values and traditions of American culture as revealed in TV programs, films and TV and print-based advertisements. Contributes to increased comprehension of cultural attitudes toward marriage and family, work roles and diversity. Prerequisite: grade of C (2.0) or better in ENG 10266 and special approval.

**10274 ESL: Language Skills for TOEFL I (3)**

Focusing on the development of lexico-grammatical knowledge as well as listening and reading skills, this course is designed to help students prepare for the TOEFL test and succeed in academic settings. Prerequisite: special approval.

**10275 ESL: Language Skills for TOEFL II (3)**

Continued development of lexico-grammatical knowledge (including idiomatic language) as well as listening and reading skills. Designed to further prepare students for the TOEFL and succeed in academic settings. Prerequisite: special approval.

**10284 ESL Technical Writing (3)**

Introduces principles of technical writing appropriate to professional communication. Provides practice in the production and evaluation of technical documents, including research reports, proposals and instruction manuals. Prerequisite: special approval.

**10285 ESL Business English (3)**

Instruction in principles of effective business communication and practical application of those principles in writing letters, memos, e-mail and reports. Prerequisite: special approval.

**10290 ESL University Orientation (1)**

Assist ESL students in making the transition to the university, familiarizing students with campus life, refining language and study skills, exploration of relevancy of such skills in various majors. S/U grading. Prerequisite: special approval.

**10295 Special Topics in ESL (3)\***

Special topics in content-based teaching of English as a second language. Prerequisite: special approval.

**11001 Introduction to College Writing—Stretch (3)**

Introduces the instruction and experiences necessary for students to acquire college-level literacy, with an emphasis on reading and writing college-level texts. Prerequisite: ACT score 1-16; or SAT score 200-600; or Compass writing score of 0-52.

**11002 College Writing I—Stretch (3)**

Continues the instruction and practice necessary to write for college, with emphasis on reading, thinking, writing and technological skills necessary for writing college-level texts. Prerequisite: grade of C (2.0) or better in ENG 11001. Completion of this course is the same as ENG 11011. This course may be used to satisfy the Liberal Education Requirements (LER).

**11011 College Writing I (3)**

The study and practice of academic writing, including an introduction to rhetorical principles, the writing process, critical reading, research and technology. Prerequisite: ACT score 17-25; or SAT score 430-590; or Compass writing score 53-94. This course may be used to satisfy the Liberal Education Requirements (LER).

**20002 Introduction to Technical Writing (3)**

Introduction to communication practices within technical communities. Planning, drafting, revising and editing. Process descriptions, object descriptions, instructional texts, technical correspondence, problem reports, critical reflection. Prerequisite: ENG 11011 or HONR 10197.

**20021 Introduction to Creative Writing (3)**

Practice in various forms of creative writing with some emphasis on student interests and on sources of creativity. Prerequisite: Minimum grade of C- (1.7) in ENG 11011 or 11002 or 21011 or HONR 10197 or ACT combined English/Writing score of 26 or higher or SAT Writing score of 600 or higher.

**21001 Introduction to Ethnic Literature of the United States (3)**

Study of selected ethnic American writers; may include works by African, Asian, Hispanic, Jewish, Native Americans and other groups. Prerequisite: ENG 11011 or 11002 or HONR 10197 or ACT combined English/Writing score of 26 or higher or SAT Writing score of 600 or higher. This course may be used to satisfy the diversity requirement.

**21002 Introduction to Women's Literature (3)**

Introduction to works by women writing in English, and to literary and gender issues they raise. Prerequisite: ENG 11011 or 11002 or HONR 10197 or ACT combined English/Writing score of 26 or higher or SAT Writing score of 600 or higher. This course may be used to satisfy the diversity requirement.

**21003 Introduction to LGBT Literature (3)**

Introduction to lesbian, gay, bisexual and transgendered literature in English and to issues of gender, sexuality and culture raised by this literature. Prerequisite: ENG 11011 or 11002 or 21011 or HONR 10197 or ACT combined English/Writing score of 26 or higher or SAT Writing score of 600 or higher. This course may be used to satisfy the diversity requirement.

**21011 College Writing II (3)**

Continuation of college-level writing instruction with emphasis on research and inquiry, culminating in a lengthy written and/or multi-modal project. Prerequisites: ENG 11011 or 11002 or HONR 10197 or ACT combined English/Writing score of 26 or higher or SAT Writing score of 600 or higher; and 24 or more semester hours. This course may be used to satisfy the Liberal Education Requirements (LER).

**21054 Introduction to Shakespeare (3)**

Study of representative plays and poems in the context of Shakespeare's age, his language and his cultural influence. Prerequisite: ENG 11011 or 11002 or 21011 or HONR 10197 or ACT combined English/Writing score of 26 or higher or SAT Writing score of 600 or higher. This course may be used to satisfy the Liberal Education Requirements (LER).

**22071 Great Books I (3)**

Great works of world literature read in English from ancient world to 1700, covering a wide range of ethnic and national voices, genres and traditions. Prerequisite: ENG 11011 or 11002 or 21011 or HONR 10197 or ACT combined English/Writing score of 26 or higher or SAT Writing score of 600 or higher. This course may be used to satisfy the Liberal Education Requirements (LER).

**22072 Great Books II (3)**

Great works of world literature read in English from 1700 to today, covering a wide range of ethnic and national voices, genres and traditions. Prerequisite: ENG 11011 or 11002 or HONR 10197 or ACT combined English/Writing score of 26 or higher or SAT Writing score of 600 or higher. This course may be used to satisfy the Liberal Education Requirements (LER).

**22073 Major Modern Writers: British and United States (3)**

Introduction to British and United States writers of the 20th century; study of their works in their literary and cultural contexts. Prerequisite: ENG 11011 or 11002 or HONR 10197 or ACT combined English/Writing score of 26 or higher or SAT Writing score of 600 or higher. This course may be used to satisfy the Liberal Education Requirements (LER).

**25001 Literature in English I (3)**

British literature or combination of British and U.S. literature written before 1800 studied within a broad historical context. Comprehensive introduction to knowledge and skills that serve as a foundation for further study in literature. Prerequisite: Minimum grade of C- (1.7) in ENG 11011 or 11002 or 21011 or HONR 10197 or ACT combined English/Writing score of 26 or higher or SAT Writing score of 600 or higher.

**25002 Literature in English II (3)**

British literature written since 1800 studied within a broad historical context. Comprehensive introduction to knowledge and skills that serve as a foundation for further study in literature. Prerequisite: Minimum grade of C- (1.7) in ENG 11011 or 11002 or 21011 or HONR 10197 or ACT combined English/Writing score of 26 or higher or SAT Writing score of 600 or higher.

**25003 Literature in the United States (3)**

U.S. literature written since 1800 studied within a broad historical context. Comprehensive introduction to knowledge and skills that serve as a foundation for further study in literature. Prerequisites: ENG 11011 or 11002 or 21011 or HONR 10197 or ACT combined English/Writing score of 26 or higher or SAT Writing score of 600 or higher.

\*Course ineligible to be repeated for GPA recalculation.

\*\*Courses offered only at Regional Campuses.

**26001 Popular Forms of Literature (3)**

Introduction to popular forms of literature such as the Western, the detective story, science fiction, fantasy, the war story and others. Prerequisite: Minimum grade of C- (1.7) in ENG 11011 or 11002 or 21011 or HONR 10197 or ACT combined English/Writing score of 26 or higher or SAT Writing score of 600 or higher.

**26095 Sophomore Special Topics (3)\***

In-depth study of a particular writer, theme or literary movement, such as literature and film, gothic novels. Prerequisite: Minimum grade of C- (1.7) in ENG 11011 or 11002 or 21011 or HONR 10197 or ACT combined English/Writing score of 26 or higher or SAT Writing score of 600 or higher.

**30001 English Studies (3)**

Writing about and reading in a variety of texts and critical modes as an introduction to critical thinking and writing. Emphasis on the application of principles and methods of literary study to selected texts. Prerequisite: ENG 11011 or 11002 or 21011 or HONR 10197 and sophomore standing. This course may be used to satisfy the writing-intensive requirement with approval of major department.

**30062 Principles of Technical Writing (3)**

Introduces theoretical principles of technical communication. Extensive practice in the use, evaluation and production of complex technical documents, including research reports/research proposals. Emphasis on oral, written and electronic communication. Prerequisites: ENG 21011 or HONR 10297 and junior standing.

**30063 Business and Professional Writing (3)**

Analysis of how textual genre function in business and professional settings. Students gain extensive individual and collaborative practice writing in these genres. Prerequisites: ENG 21011 or HONR 10297 with minimum C (2.0) grade and junior standing.

**30064 Argumentative Prose Writing (3)**

Practice in writing argumentative essays, with emphasis on discussion of student work. Prerequisite: ENG 21011 or HONR 10297.

**30065 Expository Prose Writing (3)**

Practice in prose composition with emphasis on exposition and discussion of student work. Prerequisite: ENG 21011 or HONR 10297.

**30067 Fiction Writing I (3)**

Instruction and practice in writing fiction with specific models and discussions of student work on a weekly basis. Prerequisite: ENG 20021.

**30068 Fiction Writing II (3)**

Continued instruction and practice in writing of fiction with specific models and discussion of student work on a weekly basis. Prerequisite: ENG 30067.

**30069 Poetry Writing I (3)**

Instruction in and practice of writing poetry with specific models and discussion of student work on a weekly basis. Prerequisite: ENG 20021.

**30070 Poetry Writing II (3)**

Continued practice in writing of poetry with specific models and discussion of student work on a weekly basis. Prerequisite: ENG 30069.

**30095 Junior Special Topics (3)**

An opportunity to focus on important issues in literature, writing, criticism or cultural studies. Prerequisite: junior standing.

**31001 Fundamental English Grammar (3)**

Study of grammatical structures and matters of usage and style in edited U.S. English. Prerequisite: Minimum grade of C- (1.7) in ENG 11011 or 11002 or 21011 or HONR 10197 or ACT combined English/Writing score of 26 or higher or SAT Writing score of 600 or higher.

**31002 History of the English Language (3)**

Study of the development of the English language from the Indo-European period to the present. Prerequisite: Minimum grade of C- (1.7) in ENG 11011 or 11002 or 21011 or HONR 10197 or ACT combined English/Writing score of 26 or higher or SAT Writing score of 600 or higher.

**31003 Linguistics (3)**

Survey of language structure with emphasis on understanding of what we "know" when we "know" language. Prerequisite: Minimum grade of C- (1.7) in ENG 11011 or 11002 or 21011 or HONR 10197 or ACT combined English/Writing score of 26 or higher or SAT Writing score of 600 or higher.

**31004 Lexicography/Lexicology (3)**

In-depth study of the lexicon in language use and the reasons for its expansion and continuous change. Study of tools in lexicography and analysis of the role of lexicography in language education. Prerequisite: Minimum grade of C- (1.7) in ENG 11011 or 11002 or 21011 or HONR 10197 or ACT combined English/Writing score of 26 or higher or SAT Writing score of 600 or higher.

**31005 Child Second Language Acquisition (3)**

Explores theory, research and teaching/learning applications of second language acquisition in children. Prerequisite: ENG 31003.

**31006 World Englishes (3)**

Explores English varieties in the context of world languages, examining language politics with a focus on first/second language education and literacy in an electronic age. Prerequisite: ENG 11011 or 11002 or HONR 10197 or ACT combined English/Writing score of 26 or higher or SAT Writing score of 600 or higher and sophomore standing. This course may be used to satisfy the writing-intensive requirement with approval of major department.

**31007 TESL Pedagogy I (3)**

Theoretical bases, approaches, techniques of second language pedagogy at the elementary and secondary levels. Inquiry into ESL methods, materials and lesson-planning. Corequisite: ENG 41092 or 41192. Prerequisites: ENG 21011 or HONR 10297; and EDPF 29525.

**31095 Special Topics in Linguistics (3)**

Study of specific topics in linguistics such as sociolinguistics, phonetics and phonology or bi- and multilingualism. Prerequisite: ENG 21011 or HONR 10297.

**32001 Children's Literature (3)**

Survey of children's literature from Mother Goose rhymes and picture books through modern realistic fiction. Prerequisite: Minimum grade of C- (1.7) in ENG 11011 or 11002 or 21011 or HONR 10197 or ACT combined English/Writing score of 26 or higher or SAT Writing score of 600 or higher.

**32002 Literature for Young Adults (3)**

Study of literature appropriate to young adults. Prerequisite: Minimum grade of C- (1.7) in ENG 11011 or 11002 or 21011 or HONR 10197 or ACT combined English/Writing score of 26 or higher or SAT Writing score of 600 or higher.

**33001 U.S. Literature to 1865 (3)**

U.S. literary themes, genres and authors studied in their historical and cultural contexts. Selections from the Colonial period through the Civil War. Prerequisites: ENG 30001; and 25001 or 25002.

**33002 U.S. Literature, 1865-1945 (3)**

U.S. literary themes, genres and authors studied in their historical and cultural contexts. Selections from the close of the Civil War through World War II. Prerequisites: ENG 30001; and 25001 or 25002.

**33003 U.S. Literature, 1945-Present (3)**

U.S. literary themes, genres and authors studied in their historical and cultural contexts. Selections from the close of World War II to the present. Prerequisites: ENG 30001; and 25001 or 25002.

**33011 African-American Literature (3)**

Studies in African-American literature, including such writers as Wheatley, Hammon, Douglass, Jacobs, L. Hughes, Toomer, Cullen, Hurston, Wright, Baldwin, Ellison, Baraka, Walker, Morrison, Brooks and Angelou. Prerequisites: ENG 30001; and 25001 or 25002. This course may be used to satisfy the diversity requirement.

**34001 Medieval English Literature (3)**

British literary themes, genres and authors studied in their historical and cultural contexts. Selections from Anglo-Saxon and Middle English literature. Prerequisites: ENG 30001; and 25001 or 25002.

**34002 British Literature, 1500-1660 (3)**

British literary themes, genres and authors studied in their historical and cultural contexts. Selections from Renaissance and Reformation literature through the English Civil War. Prerequisites: ENG 30001; and 25001 or 25002.

**34003 British Literature, 1660-1800 (3)**

British literary themes, genres and authors studied in their historical and cultural contexts. Selections from Restoration, Augustan and early Romantic literature. Prerequisites: ENG 30001; and 25001 or 25002.

**34004 British Literature, 1800-1900 (3)**

British literary themes, genres and authors studied in their historical and cultural contexts. Selections from Romantic and Victorian literature. Prerequisites: ENG 30001; and 25001 or 25002.

**34005 British and Irish Literature, 1900-Present (3)**

British and Irish literary themes, genres and authors studied in their historical and cultural contexts. Selections from modern and postmodern literature. Prerequisites: ENG 30001; and 25001 or 25002.

**34011 World Literature in English (3)**

An examination of selected writings in English by Third World, postcolonial or other writers in English, excluding British and U.S. authors. Prerequisites: ENG 30001; and 25001 or 25002.

**34021 Women's Literature (3)**

Critical and theoretical consideration of gender issues concerning British and U.S. women writers studied in their historical and cultural contexts. Prerequisites: ENG 30001; and 25001 or 25002. This course may be used to satisfy the diversity requirement.

**34031 Short Story (3)**

Critical analysis of short stories written by important world authors. Selections include stories originally written in English and stories translated into English. Prerequisites: ENG 30001; and 25001 or 25002.

**34055 Shakespeare (3)**

Study of plays representing Shakespeare's entire career, including *Henry IV* parts I and II, *The Merchant of Venice*, *Measure for Measure*, *Hamlet*, *Othello* and *The Tempest*. Prerequisites: ENG 30001; and 25001 or 25002.

**34065 Chaucer (3)**

Close study of Chaucer's poetry including *Canterbury Tales*, *Troilus and Criseyde* and selected lyric poems. Prerequisites: ENG 30001 and 25001 or 25002.

**34095 Special Topics: Major Author Studies (3)**

(Repeated registration permissible when topic varies) Intensive study of one or more authors from the English-speaking world. Prerequisites: ENG 30001 and 25001 or 25002.

**35101 Literature and Other Disciplines (3)**

Study of literature in relation to, or from the standpoint of, another discipline such as psychoanalysis, psychology, religion, theology, music and painting. Prerequisites: ENG 30001 and 25001 or 25002.

**35201 The Bible As Literature (3)**

Study of the *Bible* as a great book subject to literary criticism and as a main document of Western culture. Old and New Testaments read. Prerequisites: ENG 30001 and 25001 or 25002.

**35301 LGBT: Critical Perspectives (3)**

Study of theory, language and other aspects of lesbian, gay, bisexual and transgendered literature and culture. Prerequisites: ENG 30001 and 25001 or 25002. This course may be used to satisfy the diversity requirement.

**36001 Literary Criticism (3)**

Examination of principal works and theories of major critics. Contemporary critical methodologies include reader response analysis, semiotics and cultural criticism. Prerequisites: ENG 30001 and 25001 or 25002.

**37001 Classical Rhetoric (3)**

Ancient approaches to rhetoric studied in their historical and cultural contexts. Selections from Greek and Roman thinkers such as the Sophists, Plato, Aristotle, Cicero and Quintilian. Prerequisites: ENG 30001; and 25001 or 25002.

**37101 Critical Rhetorical Studies of Texts in Context (3)**

Students learn critical analytic methods and apply them to written texts, examining the rhetorical function of their linguistic elements and their relationship to rhetorical contexts. Prerequisites: ENG 30001; and 25001 or 25002.

**37201 Writing in Communities (3)**

Examines writing practices in workplace, family and local communities. Students read/write literacy narratives, read scholarship on community literacies and study/participate in specific writing communities. Prerequisite: ENG 30001, 25001 or 25002.

**39095 Special Topics in Literary History (3)**

(Repeated registration permissible when topic varies) Study of selected topics in literary history such as multiculturalism, canon formation, Colonial literature. Prerequisites: ENG 30001 and 25001 or 25002.

**39195 Special Topics in Drama (3)**

(Repeated registration permissible when topic varies) Study of selected topics in drama such as comedy and tragedy; realism and nonrealism; political, religious, period drama. Prerequisites: ENG 30001 and 25001 or 25002.

**39295 Special Topics in Poetry (3)**

(Repeated registration permissible when topic varies) Study of selected topics in poetry such as poetic form, historical and cultural contexts, and artistic movements. Prerequisites: ENG 30001 and 25001 or 25002.

**39395 Special Topics in Fiction (3)**

(Repeated registration permissible when topic varies) Study of selected topics in fiction such as the autobiographical novel, the novella and the short story. Prerequisites: ENG 30001 and 25001 or 25002.

**39495 Special Topics in Comparative Literature (3)**

(Repeated registration permissible when topic varies) Study of selected topics in comparative literature such as movements and genres in world literature, the interrelationships of the arts. Prerequisites: ENG 30001 and 25001 or 25002.

**39595 Special Topics in Literary Criticism (3)**

(Repeated registration permissible when topic varies) Study of selected topics in literary criticism such as reader response criticism, psychoanalytic methodologies or Marxist approaches. Prerequisites: ENG 30001 and ENG 25001 or 25002.

\*Course ineligible to be repeated for GPA recalculation.  
\*\*Courses offered only at Regional Campuses.

**39695 Special Topics in Ethnic Literature of the United States (3)**

(Repeated registration permissible when topic varies) Study of selected topics in ethnic literature such as the literature of one ethnic group, race and ethnicity in U.S. culture. Prerequisites: ENG 30001 and 25001 or 25002.

**39795 Special Topics in Women's Literature (3)**

(Repeated registration permissible when topic varies) Study of selected topics in women's literature organized around literary, historical and theoretical issues. Prerequisites: ENG 30001 and 25001 or 25002.

**39895 Special Topics in Rhetoric, Composition and Writing (3)**

(Repeated registration permissible when topic varies) Study of selected topics in the rhetorical nature of language and literate practices such as the historical study of political, literary and professional discourse. Prerequisites: ENG 30001 and 25001 or 25002.

**39995 Special Topics Cultural Studies (3)**

(Repeated registration permissible when topic varies) Study of selected topics in cultural studies organized around a particular mode or methodology of cultural analysis. Prerequisites: ENG 30001 and 25001 or 25002.

**40010 Writing Portfolio (2)**

Directed practice in constructing a portfolio of original writing, which may be creative, expository, technical or preprofessional in nature. Restricted to students in the writing minor. IP grade permissible. Prerequisites: junior standing and special approval.

**41001 Sociolinguistics in Schooling (3)**

Examines the interactions between society and language. Explores pedagogical implications of language variation. Prerequisite: ENG 31003. This course may be used to satisfy the writing-intensive requirement with approval of major department.

**41002 Computers in L2 Teaching (3)**

Designed for teachers of language and culture, this course explores the availability of technology, its implementation in the classroom and its integration with second language skills. Prerequisite: ENG 21011 or HONR 10297.

**41008 TESL Pedagogy II (3)**

In-depth analysis of theory and practice of second language pedagogy at the elementary and secondary levels. Special focus on literacy learning, language for specific purposes instruction and course design. This course may be taken in the same semester as ENG 41009 Student Teaching. Prerequisite: ITEC 19525 and EDPF 29525 and EDPF 29535. Corequisite: ENG 41009.

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**41009 Student Teaching (9)**

Supervised practicum in the teaching of ESL, grades P-12. Prerequisite: admission to student teaching. Corequisite: ENG 41525.

**41092 ESL/EFL Practicum I (3)**

This course provides students practical teaching opportunities in teaching English as a second/foreign language. Corequisite: ENG 31007.

**41093 Variable Title Workshop in English (1-6)**

An opportunity to focus on concerns of the discipline and on new developments in writing, criticism, literature and career opportunities. S/U grading. Prerequisite: junior standing.

**41096 Individual Investigation (1-3)**

Open to advanced undergraduate students in English. Only 3 credit hours of individual investigation count toward the English major. Prerequisites: special approval of instructor and department and junior standing.

**41192 ESL/EFL Practicum II (3)**

This course provides students seeking educational licensure opportunities in teaching English as a second/foreign language. Corequisite: ENG 31007.

**41525 Inquiry into Professional Practice (3)**

Preparation for student teaching of ESL, grades K-12. Prerequisite: admission to student teaching. Corequisite: ENG 41009.

**46201 Nineteenth-Century European Literature (3)**

Major European writers of the 19th century; romanticism, realism, naturalism, symbolism and related movements. Prerequisite: junior standing.

**46203 Twentieth-Century European Literature (3)**

Major European writers of the 20th century; modernism, postmodernism and related movements. Prerequisite: junior standing.

**49091 Senior Seminar (3)**

Intensive study of a special topic in English studies. Students will complete a long writing project during the semester. Enrollment limited to English majors. Prerequisites: ENG 30001; and 25001 or 25002. This course may be used to satisfy the writing-intensive requirement with approval of major department.

**49095 Senior Special Topics (3)**

Intensive study of topics that will vary each semester. Prerequisites: ENG 30001; and 25001 or 25002.

**ENTREPRENEURSHIP (ENTR)****27056 Introduction to Entrepreneurship (3)**

The study of the entrepreneurial process from conception to birth of a new venture. This includes attributes of successful entrepreneurs, 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. Prerequisite: none.

**27065 Entrepreneurial Experience I (3)**

First of a two-course sequence designed to immerse entrepreneurship majors into the dynamics of starting and running a micro-business. Focuses on identifying market needs, researching financial viability of business venture to meet that need, and marshalling the resources to launch a business. Prerequisites: BUS 10123 and ENTR 27056 and entrepreneurship (ENTR) major.

**27075 Entrepreneurial Experience II (2)**

Continuation of Entrepreneurial Experience I; focuses on growing and running the micro-business throughout the academic year with planned liquidation or shutdown by the end of the academic year. Prerequisites: BUS 10123 and ENTR 27056 and 27065 and entrepreneurship (ENTR) major.

**27466 Speaker Series in Entrepreneurship (1)**

Explores entrepreneurship based upon the experiences of a broad range of entrepreneurs. During the semester, at least six entrepreneurs will share their paths in establishing a successful enterprise, including some of the obstacles and missteps they made along the way. Prerequisite: BUS 10123. Corequisite: ENTR 27056.

**37045 Sales in the Entrepreneurial Venture (3)**

Selling and the management of the sales force in the entrepreneurial environment. Special focus is given to enhancing students' selling skills and background in developing an effective sales force for an entrepreneurial organization. Prerequisites: MKTG 25010 and ENTR 27075 and entrepreneurship (ENTR) major.

**37065 Entrepreneurial Finance (3)**

Introduces students to issues related to capital formation in, and the financial management of, new or young ventures. Students are introduced to sources of capital. The majority of the course focuses on how to identify and substantiate capital requirements, manage cash flow and grow appropriately in a capital-constrained environment. Prerequisites: FIN 36053 and entrepreneurship (ENTR) major.

\*Course ineligible to be repeated for GPA recalculation.  
\*\*Courses offered only at Regional Campuses.

**37075 Entrepreneurial Marketing (3)**  
Application of marketing concepts to entrepreneurial situations. Emphasis is given to market segmentation and analysis, product and service positioning and market-oriented firm development. Prerequisites: MKTG 25010 and ENTR 27075 and entrepreneurship (ENTR) major.

**37192 Practicum in Entrepreneurship (1-3)**  
(Repeatable up to 3 credit hours). Supervised work in an entrepreneurially-oriented organization to obtain experience in operating a small or entrepreneurial firm. Prerequisites: ENTR 27075 and special approval.

**37195 Special Topics in Entrepreneurship I (3)**  
Special topics course offered on an irregular basis; different topics and faculty involved each time the course is offered. Prerequisite: ENTR 27075.

**47065 New Venture Creation (3)**  
The process of formulating, planning and implementing a new venture. Students apply the skills learned in the functional areas toward the goal of starting a business. Exposure to detailed description of "how to" embark on a new venture in a logical manner. Prerequisites: ENTR 37065 and 37075 and entrepreneurship (ENTR) major. This course may be used to satisfy the writing-intensive requirement with approval of major department.

**47091 Seminar in Entrepreneurship (3)**  
Current topics in entrepreneurship. Entrepreneurship majors will not receive credit for this course--open only to entrepreneurship minors. Prerequisites: ENTR 27056 and MKTG 25010 and minimum cumulative GPA of 2.50. Not open to entrepreneurship (ENTR) majors. Corequisite: FIN 36053.

**47195 Special Topics in Entrepreneurship II (3)**  
Special topics course offered on an irregular basis; different topics and faculty involved each time the course is offered. Prerequisite: ENTR 27075.

**47292 Entrepreneurial Internship (1-3)**  
(Repeatable up to 3 credit hours). Preparation of research report concurrent with on-the-job experience with cooperating business or other organization. Prerequisites: ENTR 27075 and MKTG 25010 and ACCT 23021 and special approval.

## ENVIRONMENTAL TECHNOLOGY (ENVT)\*\*

**10001 Introduction to Environmental Technology (3)**  
Survey course in environmental technology, including health and safety, history, environmental compliance and related issues. Prerequisite: none.

**10004 Toxicology (3)**  
Examination of the terminology and classification of poisons that affect humans. Includes poison sources, modes of exposure, health effects and control measures. Prerequisite: none.

**10010 Environmental Hazards Identification and Control (4)**  
In-depth study of safety methods and procedures with lab for identifying, monitoring, handling, containing and disposing of hazardous substances and hazardous conditions in the workplace. Prerequisite: ENVT 10004.

**20001 Environmental Law (3)**  
Emphasize civil, criminal and tort liability issues; procedural and constitutional requirements; and administrative codes, rules and regulations for fire, health, safety and environmental hazards. Prerequisite: none.

**20004 Safety and Injury Control (3)**  
Examination of hazards assessment including organizational, environmental and disaster planning; health and safety inspection and reporting criteria; and first aid procedures. Prerequisite: ENVT 10001.

**20006 Fire Prevention and Control (3)**  
Conditions and properties conducive for combustible states and hazards; techniques and procedures for fire extinguishing and control; preventative strategies; fire codes and alarm systems. Prerequisite: ENVT 10001.

**20008 Environmental Safety Administration (3)**  
Organization and operation of environmental safety unit; relationships with business, governmental and community entities involved in environmental safety and hazards control. Prerequisite: ENVT 10010.

**20020 Hazardous Waste Operations and Emergency Response (3)**  
Study of hazardous waste operations and emergency response to release of hazardous materials in compliance with EPA and OSHA regulations (29CFR 1910.120). Prerequisite: none.

**20092 Environmental Technology Internship I (3)\***  
This on- or off-campus experience gives students an opportunity to apply learned concepts in the classroom to practical environmental technology situations. Prerequisite: ENVT 20008.

**21092 Environmental Technology Internship II (3)\***  
This on- or off-campus experience gives students an opportunity to apply learned concepts in the classroom to practical environmental technology situations. Pre/corequisite: ENVT 20092 and special approval.

**22095 Special Topics in Environmental Technology (3)\***  
(Repeatable for a total of 6 credit hours) Specialized instruction oriented primarily to application of current technology developed for the field of environmental technology. Course is repeatable as the specific topics will vary. Prerequisite: special approval.

**22096 Individual Investigation in Environmental Technology (1-3)\***  
Independent research of environmental technology topic supervised by an environmental technology faculty member. Prerequisite: special approval.

## EXPERIMENTAL PROGRAMS DIVISION (EXPR)

### Honors College

**10295 Selected Topics In (1-3)\***  
Experimental courses dealing with topics that would not normally fall under the purview of existing university collegial structures. Initiated by faculty, students or members of community. Prerequisite: none.

**20295 Selected Topics In (1-3)\***  
Experimental courses dealing with topics that would not normally fall under the purview of existing university collegial structures. Initiated by faculty, students or members of community. Prerequisite: none.

**30000 May 4, 1970 and Its Aftermath (3)**  
Study of the events of May 4, 1970, at Kent State University and their aftermath from various disciplinary perspectives. Prerequisite: none.

**30295 Selected Topics in (1-3)**  
Experimental courses dealing with topics that would not normally fall under the purview of existing university collegial structures. Initiated by faculty, students or members of community. Prerequisite: none.

**40295 Selected Topics in (1-3)**  
Experimental courses dealing with topics that would not normally fall under the purview of existing university collegial structures. Initiated by faculty, students or members of community. Prerequisite: none.

\*Course ineligible to be repeated for GPA recalculation.

\*\*Courses offered only at Regional Campuses.

## FASHION DESIGN AND MERCHANDISING (FDM)

### 10010 Fashion Fundamentals (3)

Introduction to the global fashion industry. Analysis of the business of fashion and how it is conceived, marketed and sold. Overview of important resources, companies and personnel who impact the industry. Prerequisite: none. Special fee: \$15 flat fee—subject to change.

### 10020 Fashion Visuals (2)

The study of color and two- and three-dimensional design as it applies to the fashion industry. Prerequisite: fashion design (FD) or fashion merchandising (FM) major. Special fee: \$13.32 flat fee—subject to change.

### 10030 Fashion Fabrics I (3)

The study of fabrics, focusing on differentiating between fibers, fabric construction and fabric names. Students study fabric properties and how they relate to fabric and usage. Prerequisite: fashion design (FD) or fashion merchandising (FM) major. Special fee: \$35 flat fee—subject to change.

### 10130 Introduction to Technical Fashion Drawing (2)

Introduction to technical fashion drawing used to communicate garment proportion and construction. Concentration on drawing a Croquis flat with accurate proportions. Prerequisite: fashion design (FD) major. Special fee: \$19 flat fee—subject to change.

### 10140 Foundations of Fashion Drawing (3)

Introduction to fashion drawing. Concentration on communicating through drawing the fashion figures and technical flats, accurate garment proportion and construction. Prerequisite: fashion design (FD) major. Special fee: \$28.50—subject to change.

### 15043 Workroom Techniques I (2)

Introduction to basic construction skills using apparel workroom methods and industrial sewing equipment. Prerequisite: fashion design (FD) or fashion merchandising (FM) major. Pre/corequisite: minimum grade of C (2.0) in FDM 10030. Special fee: \$25 flat fee—subject to change.

### 15044 Workroom Techniques II (2)

Continued study of basic construction skills using apparel workroom methods and industrial sewing equipment. Introduction to garment fit and alterations. Prerequisite: minimum grade of C (2.0) in FDM 15043. Special fee: \$25 flat fee—subject to change.

### 20013 History of Costume (3)

Chronological study and research of historic costume from the origin of clothing through the French revolutionary era and 19th- and 20th-century designers, and the influence on contemporary fashion. Prerequisites: ARTH 22006 and 22007; or HIST 11050 and 11051.

### 20020 Fashion Merchandising Presentations (3)

Study of fashion information, research sources and visual presentation formats used in the fashion industry. Prerequisite: fashion merchandising (FM) major. Special fee: \$15 flat fee—subject to change.

### 20030 Fashion Apparel Analysis (3)

Analysis and evaluation of fashion apparel; quality standards of ready-to-wear apparel and factors that influence the aesthetic and functional performance of the end product. Prerequisite: minimum grade of C (2.0) in FDM 10030.

### 20040 Fashion Fabrics II (3)

Continued study of fabrics, focusing on analyzing fabrics in detail. Also included is the study of laces, trims, high performance fabrics and current events in the textile industry, including legislation. Prerequisite: minimum grade of C (2.0) in FDM 10030. Special fee: \$35 flat fee—subject to change.

### 20121 Fashion Drawing I (3)

Advanced study of design illustration techniques as applied to the fashion figure through the use of live model drawing. Concentration on fabric rendering and drape as illustrated on the fashion figure. Introduction to technical flats used for illustrating garment construction. Prerequisites: minimum grade of C (2.0) FDM 10020 and 10140. Corequisite: FDM 20141. Special fee: \$19 flat fee—subject to change.

### 20122 Fashion Drawing II (3)

Continued study of fashion illustration techniques through the use of Croquis books and figure layouts. Introduction to different design markets and research and on how illustration reflects different markets. Instruction on stylizing according to market. Prerequisites: minimum grade of C (2.0) FDM 20121 and 20141. Corequisite: FDM 20142. Special fee: \$19 flat fee—subject to change.

### 20131 Technical Fashion Drawing I (3)

Advanced study of design illustration techniques used to communicate design ideas as applied to technical fashion drawings. Concentration on fabric rendering and drape through the development and use of Croquis to show loose flats. Prerequisites: minimum grade of C (2.0) in FDM 10020 and 10130. Corequisite: FDM 20141. Special fee: \$19 flat fee—subject to change.

### 20132 Technical Fashion Drawing II (3)

Continued study of technical fashion illustration techniques through the use of Adobe Illustrator, line plans and Croquis books for research. Introduction to design markets, research and presentations to buyers. Use of drawing software for technical flats and construction details. Prerequisites: minimum grade of C (2.0) in FDM 20131 and 20141. Special fee: \$30 flat fee—subject to change.

### 20141 Flat Pattern/Draping I (3)

Development of basic bodice, skirt and sleeve muslins and slopers. Patternmaking principles of dart manipulation and added fullness. Construction techniques for bodice, skirt, sleeve, collar and shirt variations. Introduction to computer patternmaking and specification sheets. Prerequisites: minimum grade of C (2.0) in FDM 10030 and 15044; and pre/corequisite: MATH 10041 or 11009 or 11010 or 11011 or 11012. Corequisite: FDM 20121 or 20131. Special fee: \$75 flat fee—subject to change.

### 20142 Flat Pattern/Draping II (3)

Development of torso sloper. Drafting and draping contoured bodice and torso patterns. Pattern development, construction and fitting of spring dress from sketch. Sleeve/bodice combinations. Pant sloper development. Prerequisite: minimum grade of C (2.0) in FDM 20141. Corequisite: FDM 20122. Special fee: \$75 flat fee—subject to change.

### 20260 Quantitative Concepts in Retailing (3)

Study of the retailing accounting method, calculations, ratios and percentages. Study of the components of price changes, total cost of merchandise sold and operating expenses. Prerequisites: FDM 20263; and MATH 10041 or 11011 or 11012.

### 20261 Store Operations (3)

The supervision, organization and operations management of fashion retail institutions. Pre/corequisites: FDM 10020 and 20260 and ACCT 23020.

### 20263 Fashion Retail Industry (3)

Study of retail organizations and structures within the fashion industry. Analysis of supervision, organization, and operations management of fashion retail institutions. Pre/corequisite: minimum grade of C (2.0) in FDM 10010.

### 30013 Fashion and Pop Culture (3)

An examination of the relationship between different types of design and popular culture in America and Europe in the 20th and 21st centuries. Prerequisites: minimum grade of C (2.0) in ARTH 22006 and 22007.

**30083 Professional Seminar (3)**

Professional development strategies for fashion and related careers. Emphasis is on verbal and written communication skills. Prerequisites: fashion design (FD) or fashion merchandising (FM) major and junior standing and ENG 11011 and 21011 or HONR 10197 and 10297. Special fee: \$20 flat fee—subject to change. This course may be used to satisfy the writing-intensive requirement with approval of major department.

**30121 Fashion Design I (3)**

Study of the fashion industry, seasons and markets. Research and theoretical development of a fashion-line/collection. Continued development of drawing, rendering and technical drawing skills. Prerequisites: minimum grade of C (2.0) in FDM 20122 and 20142. Corequisite: FDM 30141. Special fee: \$20 flat fee—subject to change.

**30122 Fashion Design II (3)**

Research and theoretical development of fashion lines for specialized markets. Continued development of drawing and rendering skills. Prerequisite: minimum grade of C (2.0) in FDM 30121. Corequisite: FDM 30142. Special fee: \$10 flat fee—subject to change.

**30123 CAD for Fashion Applications (3)**

The use of CAD to produce technical drawings, sketches, color stories and textile prints for design and merchandising presentations. Prerequisite: fashion design (FD) or fashion merchandising (FM) major and junior standing. Special fee: \$50 flat fee—subject to change.

**30124 Apparel Manufacturing Processes (3)**

Students learn seam/stitch classifications, costing, sourcing, lab testing and quality assurance. Assembly-line and modular manufacturing are discussed. Prerequisites: minimum grade of C (2.0) in FDM 20132.

**30131 Technical Fashion Design I (3)**

Introduction to computerized product data management systems. Creating technical packets with detailed drawings and assembly instructions. Measuring garment prototypes for quality assessment. Prerequisites: minimum grade of C (2.0) in FDM 20132.

**30132 Apparel Construction for Specialty Markets (1)**

Construction details specific to a market are researched, discussed and duplicated. Only one specialty market is covered each class. Markets vary by class. Prerequisite: minimum grade of C (2.0) in FDM 20141.

**30133 Fashion Fabric Application (2)**

Theory and practice in the selection of fabrics and appropriate construction techniques for various apparel categories. Prerequisite: minimum grade of C (2.0) in FDM 20142. Special fee: \$25 flat fee—subject to change.

**30141 Fashion Studio I (3)**

Advanced patternmaking and construction techniques are used to create complex garments as well as gain experience using fabrics and techniques new to students. Instruction on appropriate seams and finishes for: wools, knits, sheer and silky fabrics. Introduction to technical flats used for illustrating garment construction. Prerequisite: minimum grade of C (2.0) in FDM 20142. Corequisite: FDM 30121. Special fee: \$36 flat fee—subject to change.

**30142 Fashion Studio II (3)**

Advanced draping, patternmaking and construction techniques are used to create original garments designed in Fashion Design II. Prerequisite: minimum grade of C (2.0) in FDM 30141. Corequisite: FDM 30122. Special fee: \$36 flat fee—subject to change.

**30151 Advanced Patternmaking for Technical Design (2)**

Flat-pattern assignments for advanced, complex garments. Suits, outerwear and cut/sew knits are covered. Students make patterns by traditional methods as well as by computer. Prerequisite: none. Special fee: \$60 flat fee—subject to change.

**30152 Apparel Prototype Production and Analysis (3)**

Production of sample garments for a variety of apparel markets focusing on analysis of fit. Menswear, childrens wear, missy, petites and plus-size markets are covered. Woven and knit classifications are produced. Prerequisite: none. Special fee: \$60 flat fee—subject to change.

**30153 Machine Knitting (2)**

Learn basic machine knitting techniques and create a sample book. Learn how knits are constructed in the industry. Create two garments based on research and using a theme as inspiration. Prerequisite: minimum grade of C (2.0) in FDM 10030. Special fee: \$20 flat fee—subject to change.

**30213 Fashion Marketing (3)**

Examination of fashion producers/retailers' roles in marketing communications. Analysis of consumer motivation to develop sales strategies in relationship to marketing strategies. Prerequisites: minimum grade of C (2.0) in FDM 20020 and 20030 and 20263; and MKTG 25010.

**30260 Product Development in the Fashion Industry (3)**

Researching, planning, developing and presenting a fashion product line for an identified target market with regard to prices, styling and timing. Prerequisites: minimum grade of C (2.0) in FDM 10020 and 10030; and MKTG 25010.

**30262 Fashion Merchandise Planning and Buying (3)**

Study of market sources, fashion buying techniques, assortment planning and allocation, and quantitative calculations needed in the fashion industry. Prerequisites: minimum grade of C (2.0) in FDM 10010; and MATH 10041 or 11009 or 11010 or 11011 or 11012.

**30272 Merchandise Planning and Control (3)**

Application of quantitative concepts, terms, formats and calculations used in various retail planning models and strategies. Prerequisite: FDM 20260. Special fee: \$15 flat fee—subject to change.

**35013 Fashion Accessories (3)**

The merchandising, promotion and sales of accessories. Materials, production and resources are examined by category. Prerequisites: fashion design (FD) or fashion merchandising (FM) major and junior standing.

**35063 Visual Merchandising and Display (3)**

Theory and practice of merchandise presentation for the purpose of promotion and sales. Prerequisites: minimum grade of C (2.0) in FDM 10020 and junior standing.

**35125 Textile Applied Design (3)**

Techniques used in the creation of original designs for printed fabrics. Prerequisite: minimum grade of C (2.0) in FDM 20122.

**35260 Merchandising for Home Furnishings (3)**

Introduction to the various retail classifications of home furnishing merchandise to include furniture, floor coverings, window treatments, household linens, table tops, housewares and decorative accessories. Prerequisite: none.

**35270 Computer Applications in Retailing (3)**

The application and use of the microcomputer to solve problems in assortment planning, merchandise management, trading area and site analysis, store planning, planogramming and media planning. Prerequisites: minimum grade of C (2.0) in FDM 20263; and MATH 10041 or 11009 or 11010 or 11011 or 11012. Special fee: \$15 flat fee—subject to change.

\*Course ineligible to be repeated for GPA recalculation.

\*\*Courses offered only at Regional Campuses.

**35280 Fashion Entrepreneurship (3)**

In-depth study of entrepreneurship concepts as applied to manufacturers and retailers of apparel including product development, accounting and control, merchandising and buying, operation and management, advertising and promotion. Prerequisite: minimum grade of C (2.0) in FDM 20020 and 20030 and 20263.

**35900 Florence Fashion Study Orientation (1)**

Overview of Florence fashion program, the city of Florence, living and traveling in Europe as a study abroad student. Includes assistance for obtaining required documents. Students must enroll in Florence fashion program to receive credit. S/U grading. Prerequisites: sophomore standing, 2.50 cumulative GPA; and minimum grade of C (2.0) in FDM 20030 and MKTG 25010; or FDM 20122 and 20142.

**35901 Italian Fashion and Culture (3)**

Evolution of the fashion industry in post World War II Italy. Study of the creators, design and production processes creating one of the most successful unions of commercial product and cultural expression worldwide. Prerequisite: minimum grade of C (2.0) in FDM 35900.

**40121 Fashion Portfolio I (2)**

Develop a professional design portfolio which will emphasize in-depth individual investigation of specific apparel markets, target customers and various illustrative techniques. Prerequisites: minimum grade of C (2.0) in FDM 30122 and 30142. Corequisite: FDM 40141. Special fee: \$10 flat fee—subject to change.

**40122 Fashion Portfolio II (2)**

Develop a professional fashion design portfolio geared to fall/winter. Portfolio will emphasize apparel line-building as well as illustration techniques. Prerequisite: minimum grade of C (2.0) in FDM 40121. Corequisite: FDM 40142. Special fee: \$10 flat fee—subject to change.

**40131 Technical Fashion Design II (3)**

Continued study of the fashion industry markets and garment construction and finishes appropriate to market through technical packets. Continued study of industry software used for technical design, tracking samples and logging information. Development of a "class collection" simulating the fashion industry through the production, communication and creation of all design information inclusive of costing, samples of all technical packets. Prerequisite: minimum grade of C (2.0) in FDM 30131. Corequisite: FDM 40151.

**40132 Technical Fashion Design III (3)**

Develop a portfolio that emphasizes investigation of specific apparel markets through finishes and fabrications. Portfolios will reflect concentrated classifications and include technical packs and computerized flat drawings. Prerequisite: minimum grade of C (2.0) in FDM 40131. Corequisite: FDM 40152.

**40141 Fashion Studio III (3)**

Development of patternwork, specification sheets and muslins for original line. Faculty critiques. Prerequisites: minimum grade of C (2.0) in FDM 30122 and 30142. Corequisite: FDM 40121. Special fee: \$55 flat fee—subject to change.

**40142 Fashion Studio IV (3)**

Construction and completion of garments for original line. Faculty critiques. Prerequisite: minimum grade of C (2.0) in FDM 40141. Corequisite: FDM 40122. Special fee: \$55 flat fee—subject to change.

**40151 Technical Design Studio I (3)**

Class collaborates on one collection by dividing into student teams based on classification (woven bottoms, knit tops, etc.). Patterns and muslins are created. Faculty and external professional critiques. Prerequisites: minimum grade of C (2.0) in FDM 30124 and 30131 and 30132 and 30151 and 30152 and 30153. Corequisite: FDM 40131. Special fee: \$55 flat fee—subject to change.

**40152 Technical Design Studio II (2)**

Continued work on collaborative collections. Student teams work on different classifications. The prototypes are produced in final fabrics. Faculty and external professional critiques. Prerequisite: minimum grade of C (2.0) in FDM 40151. Corequisite: FDM 40132. Special fee: \$55 flat fee—subject to change.

**40261 Fashion Buying (3)**

A study of market sources, fashion buying techniques, vendor relationships, practices and approaches as a function of assortment planning and vendor selection. Prerequisite: FDM 10030 and 30272.

**40291 Seminar in Fashion Merchandising (3)**

Suggested for final semester of the FDM major. Study of the business of fashion. This course builds and expands on all merchandising-related coursework with the goal of integrating content and applying it to real-life scenarios through critical thinking and analysis. Prerequisite: minimum grade of C (2.0) in FDM 30083 and 30213 and 30260 and 30262 and 35270. Pre/corequisites: minimum grade of C (2.0) in FDM 45011 and 45012.

**45011 Fashion Forecasting (3)**

Identifying trends to develop fashion forecasts. Interrelationships of forecasting, promotion, public relations and the media. Prerequisite: minimum grade of C (2.0) in FDM 30083 and 30213 and 30260 and 30262 and 35270.

**45012 Textiles and Apparel in the Global Economy (3)**

Global perspective on the production and marketing of textiles and apparel; historical, geographic and economic factors that influence the world trade in soft goods. Prerequisite: minimum grade of C (2.0) in FDM 30083 and 30213 and 30260 and 30262 and 35270.

**45035 Historic Textiles (3)**

Identification and analysis of textile fabrics as the reflection of culture. Pre/corequisite: HIST 11050 or 11051 or ARTH 22006 or 22007. This course may be used to satisfy the writing-intensive requirement with approval of major department.

**45092 Internship in Fashion Design and Merchandising (3)**

Supervised practical experience in the fashion industry. Eligibility requirements available from the School of Fashion Design and Merchandising field studies coordinator. Prerequisites: minimum grade of C (2.0) in FDM 30083 and junior standing and special approval.

**45093 Variable Title Workshop—FDM (1-3)**

(Repeatable for a total of 6 credit hours) S/U grading. Prerequisite: special approval. Special fee: actual cost basis.

**45095 Special Topics (1-3)**

Variable content relevant to the field of fashion. Prerequisite: special approval.

**45096 Individual Investigation (1-3)**

Individual investigation of topic above the level available through coursework. Requires submission of and approval of project proposal prior to registration. Prerequisite: special approval.

**45145 Tailoring (3)**

Traditional and contemporary techniques for constructing tailored garments. Prerequisites: minimum grade of C (2.0) in FDM 30122 and 30142. Special fee: \$15 flat fee—subject to change.

**45212 Fashion Show Productions (3)**

Analyses of fashion show formats are considered for promotion purposes. Production planning, organization and physical requirements are studied. Class produces a fashion show. Prerequisite: none.

**45392 Field Experience Fashion Study Tour (1-3)**  
Visit to domestic or foreign fashion market, including design and fabric houses or showrooms, retail stores, buying offices and other areas of the fashion industry. Prerequisite: special approval. Special fee: actual cost basis.

**45492 Field Experience Study Tour for NYC Studio Students (3)**

Visit to the New York fashion market including design and fabric houses or showrooms, retail stores, buying offices and other areas of the fashion industry. S/U grading. Prerequisites: special approval and fashion design(FD) or fashion merchandising (FM) major.

**45592 Field Experience European Fashion Study Tour for Florence Students (3)**

Visit to European fashion markets including design and fabric houses or showrooms, retail stores, buying offices and other areas of the fashion industry. S/U grading. Prerequisites: special approval and fashion design (FD) or fashion merchandising (FM) major.

## FINANCE (FIN)

**26070 Introduction to Law (3)**

Evolution and implications of fundamental legal concepts and institutions. Introduction to the case method; substantive and procedural law; and various forms of legal activity. Prerequisite: none.

**26074 Legal Environment of Business (3)**

Coverage of the nature, structure and significance of the legal and regulatory areas which confront business, with special emphasis on business ethics and environmental and international issues. Prerequisite: sophomore standing.

**36053 Business Finance (3)**

Analysis of financial decisions in business enterprise and interface of firm with capital markets. Prerequisites: minimum 2.50 cumulative GPA; and ACCT 23020 or ACTT 11000; and ECON 22060 or HONR 21197; and ECON 22061 or HONR 21297.

**36054 Intermediate Business Finance (3)**

Treatment of uncertainty in business financial analysis. Overview of investment markets, financial institutions and international financial environment. Prerequisite: finance (FIN) major and minimum 2.50 cumulative GPA and FIN 36053.

**36058 The Financial System (3)**

Analysis of financial markets and institutions emphasizing current issues, regulatory aspects and management concerns. Prerequisite: finance (FIN) major and minimum 2.50 cumulative GPA and FIN 36053.

**36059 Investments (3)**

Discussion of factors determining value of investment securities with attention to economic, regulatory and global influences. This course may count as an elective in a College of Business Administration program. Prerequisite: finance (FIN) major and minimum 2.50 cumulative GPA and FIN 36053.

**36061 Real Estate Principles (3)**

Principles and practices of real estate, real estate laws, contractual instruments, valuation, financing and markets in commercial and residential real estate. Prerequisite: finance (FIN) major and minimum 2.50 cumulative GPA and junior standing.

**36063 Individual Investment Analysis and Strategies (3)**

Examination of investment analysis and strategies with emphasis on individuals. Open only to nonfinance major. Cannot be counted toward finance major. Either this course or FIN 36059, but not both, can count as an elective in a College of Business Administration program. Prerequisite: minimum 2.50 cumulative GPA and FIN 36053; not open to finance (FIN) majors.

**36072 Law of Commercial Transactions (3)**

Introduction to real and personal property, commercial paper, agency law, business organizations, bankruptcy, secured transactions and other related areas of business law. Primarily for accounting majors. Prerequisite: minimum 2.50 cumulative GPA; and FIN 26074 or BMRT 21000; not open to finance (FIN) majors.

**36081 Principles of Insurance (3)**

Examination of insurance industry, its regulatory environment and insurance contracts. Life and health insurance, as well as property and liability insurance are covered. Prerequisites: finance (FIN) major and minimum 2.50 cumulative GPA and ECON 22060 and 22061.

**46054 Financial Risk Management (3)**

Understanding techniques and financial tools used in managing financial risk. Analysis of contracts (options, forwards, futures) undertaken in the context of financial regulation and ethical practices within the financial marketplace. Prerequisite: finance (FIN) major and minimum 2.50 cumulative GPA and FIN 36053.

**46055 Options and Futures Markets (3)**

Comprehensive analysis of options and futures markets and their role in the financial system. Valuation methods, advanced hedging, arbitration techniques and the regulatory environment. Prerequisite: finance (FIN) major and minimum 2.50 cumulative GPA and FIN 36059.

**46057 Financial Analysis (3)**

Introduction to use of computer software and methods in financial planning. Statement analysis and selected applications; i.e., working capital management, capital budgeting, planning models and option pricing. Prerequisite: finance (FIN) major and minimum 2.50 cumulative GPA and FIN 36053.

**46059 Financial Policy (3)**

Capstone course in finance with emphasis on financial policies and strategic financial decision making with respect to both short-term and long-term financial management problems. Prerequisites: finance (FIN) major and minimum 2.50 cumulative GPA and FIN 36054 and MIS 24056. This course may be used to satisfy the writing-intensive requirement with approval of major department.

**46064 International Business Finance (3)**

Management of the finance function of an international company, including foreign exchange exposure management, foreign investment, short-term and long-term capital management, and international accounting and taxation. Prerequisites: finance (FIN) major and minimum 2.50 cumulative GPA and FIN 36053 and 36054 and senior standing.

**46067 Portfolio Analysis (3)**

Principles, methods, techniques of portfolio analysis. Emphasis on determination of portfolio risks and returns. Political, ethical, global forces affecting asset returns and risks are evaluated. Prerequisite: finance (FIN) major and 2.50 cumulative GPA and FIN 36059.

**46068 Financial Management of Commercial Banks (3)**

Financial management techniques applied to commercial banks. Focus on management of liquidity, investment and loan portfolios and capital structure. Prerequisite: finance (FIN) major and minimum 2.50 cumulative GPA and FIN 36054 and 36058.

**46096 Individual Investigation in Finance (1-3)**

Opportunity for research in problem areas of interest in field of finance. Agreement of faculty member in the department must be secured prior to registering for course. Prerequisite: finance (FIN) major and minimum 2.50 cumulative GPA and special approval.

**46192 Internship in Finance (3)**

An internship for finance majors interested in obtaining career-relevant experience. Students and employers must satisfy criteria established by the department. Students are responsible for securing employment. Prerequisite: finance (FIN) major and minimum 2.50 cumulative GPA and special approval.

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**46295 Finance Special Topics (3)**

Deal with special topics in finance or new subjects not covered in other existing courses. Prerequisites: finance (FIN) major and minimum 2.50 cumulative GPA and FIN 36053 and senior standing.

**FINE AND PROFESSIONAL ARTS (FPA)****20000 Performing Arts I (3)**

An interarts course introducing expressive materials, representative literature and historical contexts of major dance, music and theatre styles with appropriate reference to other art forms. Prerequisite: none.

**20001 Performing Arts II (3)**

Continuation of Performing Arts I. Prerequisite: none.

**Special Topics****10195 Special Topics (2-5)\*****20295 Special Topics (2-5)\*****30395 Special Topics (2-5)****40495 Special Topics (2-5)**

*This program, administered by the dean, is intended to encourage interdisciplinary study, to cover areas not treated adequately in the standard course and to make available promptly the new and significant experience of the faculty.*

*Requests for the scheduling of these courses are made by faculty members or students to the sponsoring school or to the dean. The schools concerned clear the proposed course with the Curriculum Committee of the college.*

**FRENCH (FR)**

*For placement and credit in foreign language courses see Arts and Sciences—Foreign Language Requirement—Placement and Credit.*

**13201 Elementary French I (4)**

An introduction to the French language in the context of Francophone cultures. Prerequisite: none.

**13202 Elementary French II (4)**

A continuation of the introduction to the French language in the context of Francophone cultures. Prerequisite: FR 13201.

**23201 Intermediate French I (3)**

Continued development of speaking, listening, reading and writing skills using a variety of cultural materials. Prerequisite: FR 13202.

**23202 Intermediate French II (3)**

Continuation of FR 23201. Prerequisite: FR 23201.

**23207 Business French I (3)**

Terminology, organizations and modes of communication prevalent in modern French business world. Presentation of materials followed by practical exercises organized in situational units. Prerequisites: FR 23202 and special approval.

**23208 Business French II (3)**

Terminology, organizations and modes of communication prevalent in modern French business world. Presentation of materials followed by practical exercises organized institutional units. Prerequisite: FR 23207.

**23209 Field Study (2-6)\***

(Repeatable for a total of 6 credit hours) For residence and/or field research in a French-speaking community. Prior to registration for this course, students must obtain departmental approval. IP grade permissible. Prerequisite: special approval.

**33095 Selected Topics in French (3)**

(Repeatable for a total of 9 credit hours) Topic to be announced in the *Schedule of Classes*. Prerequisite: FR 33211.

**33211 French Conversation (3)**

A course designed to enhance students' oral proficiency through instruction in facilitating conversation and the discussion of culture-based texts. Prerequisite: FR 23202.

**33212 French Composition (3)**

A course designed to develop writing and reading skills, and in particular to prepare students to read and write about French literature. Prerequisite: FR 23202.

**33213 Intensive French Grammar (3)**

Comprehensive, in-depth review of French grammar. Students should already have a grounding in spoken and written French. Prerequisites: FR 33211 and FR 33212.

**33215 French Phonetics and Diction (3)**

Study of sounds of French language and their relation to spelling; application of international phonetic alphabet to French. Study augmented by recordings. Prerequisite: FR 33211.

**33231 Translation Practice: French (1)**

Translation practice with French texts using principles and techniques learned in the lecture class. Corequisite: MCLS 30230.

**33240 Conversation for Business and Special Purposes: French (3)**

Introduction to the special vocabulary of business and other special subject areas; introduces the concept of language for special purposes and emphasizes the use of special vocabulary in conversations in business and other settings. Prerequisite: FR 33211.

**33301 French Play Production (3)**

Intensive analysis of one or two plays with equal emphasis on text and problems involved in staging them; public performance in French of one or two plays. Prerequisite: FR 23201.

**33335 Introduction to French Theatre (3)**

Evolution of French dramatic literature from the Middle Ages to the present. Readings of representative works with lectures and analyses. Course conducted in French. Prerequisite: FR 33212. This course may be used to satisfy the writing-intensive requirement with approval of major department.

**33336 Introduction to French Poetry (3)**

Evolution of French poetry from the Middle Ages to the present. Readings of representative works with lectures and analyses. Course conducted in French. Prerequisite: FR 33212. This course may be used to satisfy the writing-intensive requirement with approval of major department.

**33337 Introduction to the French Novel (3)**

Evolution of French novel from 17th century to present. Readings of representative major works, lectures and analyses. Course conducted in French. Prerequisite: FR 33212. This course may be used to satisfy the writing-intensive requirement with approval of major department.

**33421 French Civilization (3)**

A survey of French history and culture from its beginnings to World War II. Course conducted in French. Prerequisite: FR 33212.

**43091 French Seminar (3)**

Topic to be announced. Prerequisite: FR 33335 or 33336 or 33337.

**43093 Variable Title Workshop in French (1-6)**

Workshops individually designed to provide instruction and training in specific areas of French studies. S/U grading. Prerequisite: departmental special approval.

**43096 Individual Investigation (1-3)**

(Repeatable for a total of 6 hours) Allows the advanced, serious student to carry out research/study project on French literature, language or culture. Prior approval of supervising faculty members, department required. IP grade permissible. Prerequisite: special approval.

**43213 French Composition—Advanced (3)**

French stylistics developed by analyses of literary extracts and practice in written expression. Prerequisite: FR 33212.

**43216 Contemporary French Culture (3)**

A study of selected sociological, political, cultural or economic issues in the contemporary Francophone world. Prerequisite: 6 credit hours from 30000-level French courses.

**43230 Advanced Translation Practice: French (3)**

Theory and practice course that discusses translation theory and emphasizes French-to-English translation of selected texts in business, technology, medicine and law. Prerequisite: FR 33231. This course may be used to satisfy the writing-intensive requirement with approval of major department.

**43240 Business and Special Texts: French (3)**

Survey of the typical text types of business in the French culture and language. Practice sessions focus on reading and understanding specialized texts and on the translation and composition of selected special texts in French. Prerequisite: FR 33212.

**43366 Studies in Nineteenth-Century French Literature (3)**

Study of selected topics in 19th-century French literature. Prerequisite: 6 credit hours from the 33330 level.

**43368 The Twentieth-Century French Novel (3)**

Studies of selected 20th-century French novels, with detailed study of the novel of one or several major writers or movements. Prerequisite: 6 credit hours from the 33330 level.

**43369 Twentieth-Century French Poetry (3)**

A study of selected poetry of Apollinaire, Breton, Mansour, Eluard, Michaux, Char, Reverdy, Ponge, Guillevic, Jabes, Bonnefoy, Dupin, Alpiach and others. Emphasis is placed on the relationship between poetry and the visual arts in the 20th century. Prerequisite: 6 credit hours from the FR 33330 level.

**43370 The Twentieth Century French Theatre (3)**

Studies in French drama since 1900. Prerequisite: 6 credit hours from the 33330 level.

**43380 Francophone Literature (3)**

A study of writers, movements or works representative of French-speaking national cultures outside of France. May be repeated for credit as course content changes. Prerequisite: 6 credit hours from the FR 33330 level.

**GEOGRAPHY (GEOG)****10160 Introduction to Geography (3)**

Emphasizes processes which generate diverse global human and environmental patterns. Interaction of geographical elements as expressed in spatial organization of cities, land use, and cultural and political regions. Prerequisite: none. This course may be used to satisfy the Liberal Education Requirements (LER).

**16001 Soil and Horticultural Management (3)\*\***

To provide students with an understanding of the relationship of soil, nutrients and fertilizers, and to understand how to properly plant trees, shrubs and flowers. (At Salem Campus only.) Prerequisite: none.

**17063 World Geography (3)**

Examination and comparison of geographic conditions in different regions of the world. Stresses interrelationships between people and resources within and between regions and countries. Prerequisite: none. This course may be used to satisfy the Liberal Education Requirements (LER) and diversity requirement.

**17064 Geography of the United States and Canada (3)**

Analysis of the spatial patterns of significant human and physical characteristics and interpretation of the major regions within the two nations. Prerequisite: none. This course may be used to satisfy the Liberal Education Requirements (LER) and diversity requirement.

**20195 Special Topics in Geography (1-3)\***

(Repeated registration permissible) Explores emerging topics in geography not covered in other existing courses. Variable content course. Prerequisite: none.

**20977 Survey of Geography (1)**

Introduces geography as a professional discipline; presents faculty and their research interests. S/U grading. Prerequisite: Geography (GEOG) major.

**21062 Physical Geography (3)**

Introduction to the study of the spatial characteristics of the earth's physical environment, including how humans interact with it. Topics include weather and climate, vegetation, soils, ecosystems, landforms and land-formation processes, human impacts on Earth systems, and human/societal adaptations to the physical environment. Prerequisite: none. This course may be used to satisfy the Liberal Education Requirements (LER).

**21063 Physical Geography Laboratory (1)**

Practical experience examining physical geographic processes, including the study and manipulation of map projections, Earth-sun relationships and experiments relating to the atmosphere, biosphere, lithosphere and hydrosphere. Corequisite: GEOG 21062.

**22040 Introduction to Global Tourism (3)**

(Cross-listed with RPTM 26060) Introduction to travel and tourism around the world, including tourism technologies, cultural and natural environments as attractions, benefits of travel, travel ethics and sustainable development. Prerequisite: none.

**22061 Human Geography (3)**

Introduction to the field of human geography. Topics include population, migration, folk and popular culture, language, religion, ethnicity, political geography, development, agriculture, industry, services, urban patterns and resource problems. Emphasis is placed on historic and current spatial patterns and reasons for their change. Prerequisite: none. This course may be used to satisfy the Liberal Education Requirements (LER) and diversity requirement.

**29160 Mapping Our World (3)**

Introduction to maps and their uses, stressing their importance as a vehicle for understanding and communicating information about our world and its spatial characteristics. Prerequisite: none.

**31062 Fundamentals of Meteorology (3)**

Analysis of weather elements emphasizing energy exchanges and controls and atmospheric circulation. Methods of weather prediction and man's modification of weather are highlighted. Prerequisite: none.

**31064 Principles of Climatology (3)**

A study of the physical processes causing the distribution of world climates. Focus on local and urban climates, climatic change and societal impacts of climate. Prerequisite: GEOG 31062.

**31070 Population and the Environment (3)**

This course examines the interrelations of population growth, resource depletion and the environment from a geographic perspective, including the principal themes of space and place. Prerequisite: none.

**31080 Geography of Wine (3)**

Examines the physical environment of viticulture including climate, soil and farm practices; the cultural tradition of wine making, consumption and trade; and regional production styles. Prerequisite: none.

\*Course ineligible to be repeated for GPA recalculation.

\*\*Courses offered only at Regional Campuses.

**32080 Politics and Place (3)**

Spatial aspects of political behavior as manifested in boundary changes, the sizes of states, interstate relations and spatial organization. Prerequisite: none. This course may be used to satisfy the diversity requirement.

**34070 Economic Geography (3)**

Study of worldwide variations in economic activities, emphasizing both the reasons for and the significance of these variations. Prerequisite: none.

**35065 Geography of Transportation and Spatial Interaction (3)**

Spatial interaction. Study of flows, networks and integrated systems at different spatial scales. Transport and economic development. Models and methods of analysis. Prerequisite: none.

**36065 Cities and Urbanization (3)**

Course examines what is a city, how it has evolved over time under changing economic conditions, what is its internal structure and how this has been influenced by transportation developments. Special attention is paid to the causes and consequences of social diversity within the city and how cities differ throughout the world. Prerequisite: none. This course may be used to satisfy the diversity requirement.

**37010 Geography of Ohio (3)**

Study of Ohio as a distinctive region, its environment and the varied characteristics of its population, its historical geographic development, and contemporary patterns and problems. Prerequisite: junior standing.

**37040 Geography of Africa (3)**

This course deals with the complex geographical and cultural elements in Africa. It demonstrates how the interaction of these elements has affected Africa's linkages to other continents, especially North America. Furthermore, it discusses how this diversity has affected Africa's economic development and political evolution. Prerequisite: none. This course may be used to satisfy the diversity requirement.

**37050 Geography of Russia and the Commonwealth of Independent States (3)**

Study of the physical, economical, political and cultural geography of Russia, Ukraine, Central Asia and other components of the former Soviet Union. Prerequisite: none. This course may be used to satisfy the diversity requirement.

**37066 Geography of Europe (3)**

Examination of the cultural, economic, political and physical geography of Western and Eastern Europe (excluding the former U.S.S.R.). Prerequisite: none. This course may be used to satisfy the diversity requirement.

**37070 Geography of East and Southeast Asia (3)**

Analysis of the physical and cultural geography of east and Southeast Asia, extending from Japan and China to Burma and Indonesia. Prerequisite: none. This course may be used to satisfy the diversity requirement.

**37079 Geography of South Asia (3)**

Physical and cultural geography of South Asian region including India, Pakistan, Bangladesh, Nepal, Bhutan and the Maldiv Islands. Prerequisite: none. This course may be used to satisfy the diversity requirement.

**37084 Geography of South America (3)**

Overview of region and survey of each country emphasizes systematic similarities and differences in physical environment, culture, economic development, population, land use, politics and history. Prerequisite: none. This course may be used to satisfy the diversity requirement.

**37085 Geography of Central America and Mexico (3)**

Geographic analysis and interpretation of major regions of Central America, Mexico and the Caribbean. Evaluation of physical environments and development problems. Prerequisite: none. This course may be used to satisfy the diversity requirement.

**39002 Statistical Methods in Geography (3)**

Explores probability theory, spatial statistics, estimation procedures, hypothesis testing, spatial sampling, methods of areal association and regression analysis. Geographic applications are emphasized. Prerequisite: MATH 10041 or 11009 or 11010 or 11011.

**39161 Introduction to Cartography (3)**

Mapmaking from compilation through reproduction; development of skills in drafting, generalization, symbolization, design; familiarization with relief representation, statistical maps and map projections. Corequisite: GEOG 39162. Prerequisites: GEOG 29160 and MATH 10041.

**39162 Introduction to Cartography Laboratory (1)**

Practical experience in mapmaking. Actual map compilation design, drafting and reproduction is stressed. Corequisite: GEOG 39161.

**40093 Variable Title Workshop in Geography (1-6)**

S/U grading. Prerequisite: special approval.

**40191 Seminar in Geography (3)**

(Repeatable for a total of 6 credit hours) Advanced study of the historical development of geography and of contemporary issues in the field. Emphasis on methods of geographic investigation and presen-

tation of results. Prerequisite: junior standing and geography (GEOG) major. This course may be used to satisfy the writing-intensive requirement with approval of major department.

**40192 Practicum in Geography (1-3)**

(Repeated registration permissible) Practical experience in using or teaching geographic techniques and/or problem-solving. Faculty supervised. S/U grading; IP grade permissible. Prerequisite: special approval.

**40195 Special Topics in Geography (1-3)**

Prerequisite: special approval.

**40292 Field Experience in Geography (1-6)**

(Repeated registration permissible) Examination of geographic landscapes in the field. S/U grading. Prerequisite: special approval. Special fee—actual cost basis.

**40392 Practicum in Emerging Geographic Trends (1-6)**

(Repeated registration permissible) Examination of newly emerging geographic topics and techniques. S/U grading. Prerequisite: special approval. Special fee—actual cost basis.

**40996 Individual Investigation in Geography (1-3)**

Individual undergraduate investigation or research on specific geographical problems. IP grade permissible. Prerequisite: special approval.

**41050 Polar and Alpine Environments (3)**

The geographic features of the Earth's cold treeless regions are examined including climate, soils, glaciers, permafrost, plant and animal life and human activities. Prerequisite: GEOG 21062.

**41052 Glaciers and Glaciation (3)**

(Cross-listed with GEOL 44052) Examination of how glacial ice masses change the shape of the Earth's surface, how they are integral to climate and sea-level change and how they pose high risk hazards. Prerequisite: GEOG 21062 or GEOL 11040.

**41062 Advanced Physical Geography (3)**

Advanced systematic analysis of the elements of physical geography. Specific analytical methodologies and their application to physical geography are also discussed. Prerequisite: GEOG 21062.

**41066 Climate Change and Its Impact (3)**

Examination of the evidence and causes of climate change and how this data is assessed. Past, present and future impacts of climate change and variability are discussed, along with policy implications. Prerequisites: GEOG 31062 and 31064.

**41073 Conservation of Natural Resources (3)**  
Evaluation of past and current problems associated with the management of natural resources and the environments associated with their utilization. Prerequisite: none.

**41074 Resource Geography (3)**  
Culture-technology and distance in relation to resource adequacy and management concepts for societal decisions about common property and situations with external economies. Prerequisite: junior standing.

**41082 Geography of Soils (3)**  
An edaphological approach to soils including morphology, formation, classification, geographical distribution and utilization. Fieldwork required. Prerequisite: GEOG 21062.

**42040 Tourism Development and Recreational Travel (3)**  
(Cross-listed with RPTM 46000) Investigation of travel and tourism development using an interdisciplinary social science approach. Prerequisite: RPTM 36060.

**42052 Medical Geography (3)**  
Geographic patterns of morbidity and mortality in the past and the present; diffusion of diseases and medicine; health in Third World emphasized. Prerequisite: GEOG 22061.

**42064 Historical Geography of the United States and Canada (3)**  
Regional origins and growth, evolution of spatial organization, changing evaluation of environments, and past geographies in United States and Canada from pre-Colonial times on. Prerequisite: GEOG 17064.

**44010 Geography of the Global Economy (3)**  
Geographic analysis of the increasing interconnectedness of economic activity. The social, technological and political changes associated with globalization are also discussed. Prerequisite: GEOG 34070 or ECON 22061. This course may be used to satisfy the writing-intensive requirement with approval of major department.

**44070 Spatial Analysis and Location Theory (3)**  
Classical theories for location of economic activities and contemporary approach of spatial analysis, spatial organization of economic systems, behavioral models in economic geography, spatial allocation problems. Prerequisite: none.

**45085 Urban Transportation (3)**  
Spatial analysis of urban transportation, travel behavior, modes. Trip generation and distribution models, transportation planning, urban transportation problems. Prerequisite: GEOG 36065.

**46035 Marketing Geography (3)**  
Study of spatial arrangements and functions of market centers and the internal spatial patterns of retail stores, location analysis and site selection. (Practicum required.) Prerequisite: GEOG 36065.

**46065 Advanced Urban Geography (3)**  
Investigation of advanced concepts pertaining to the spatial structure of urban areas. Prerequisite: GEOG 36065.

**46070 Urban and Regional Planning (3)**  
Analysis of geographical aspects of planning for cities and regions. Prerequisite: GEOG 36065.

**46092 Internship in Geography and Planning (3-6)**  
Preprofessional work experience in local, regional and environmental planning agencies and in business designed to utilize and develop academic skills. Prerequisite: special approval.

**49070 Geographic Information Science (3)**  
Introduction to theories and methods for geographic data processing, including data capture and input, data storage and management, and data analysis and displays. Emphasis is on lab exercises using GIS software packages for real world applications. Prerequisite: at least 6 credit hours of geography (GEOG) courses.

**49076 Spatial Programming (3)**  
Examination of the design, development and use of geographic information technologies with computer programming to model, process and visualize geographic phenomena. Prerequisite: GEOG 49070.

**49080 Advanced Geographic Information Science (3)**  
Advanced theories and techniques for handling geographic information systems, including 2-D and 3-D processing of geographic information, detection and analysis of geographic patterns, 2-D and 3-D mapping of geographic information, modeling of geographic processes, and an overview of GIS programming tools. Prerequisite: GEOG 49070.

**49098 Research in Geographic Information Technology (1-3)**  
(Repeated registration permissible) Individual research on a topic in geographic information technology. IP grade permissible. Prerequisite: special approval.

**49162 Advanced Cartography (3)**  
Study of the design and production of complex maps. Symbolization, composition and color utilization. Corequisite: GEOG 49163. Prerequisite: GEOG 39161.

**49163 Advanced Cartography Laboratory (1)**  
Practical experience in the techniques of production and reproduction of maps. Corequisite: GEOG 49162.

**49165 GeoMapping (3)**  
Information theory, data collection, automated mapping systems. Representation of surfaces, lines and points, geographic data structures and applications. Mapping by line printer, interactive terminals. Prerequisite: GEOG 39002 or 39161.

**49198 Research in Cartography (1-3)**  
(Repeated registration permissible) Individual research on a topic in cartography. IP grade permissible. Prerequisite: special approval.

**49210 Earth Imagery (3)**  
The student following this course will be introduced to the full variety of methods of imaging the Earth for environmental analysis, including satellite methods. Prerequisite: GEOG 29160.

**49211 Earth Imagery Laboratory (1)**  
This course will support the lecture course, Earth Imagery, by giving the student exposure to the methods of manual measurement and interpretation of images. Corequisite: GEOG 49210.

**49230 Remote Sensing (3)**  
(Cross-listed with GEOL 42030) Emphasis on computer analysis of LANDSAT data using multivariate statistical tools. Introduces statistical methods and use of computer. Problems in Earth science are stressed. Prerequisite: special approval.

**49480 Field Study in Geography (3)**  
Present methods of planning and structuring field studies, the techniques of mapping and data gathering in the analysis of local field problems. Prerequisite: geography (GEOG) major.

**49482 Field Study of Selected Rural and Urban Areas (5)**  
Field studies of rural and urban regional problems in the United States and Canada. One month or more in field; written report on findings. Limited to 15 students. Students pay for own board and lab fee to university. Special fee-actual cost basis. Prerequisite: special approval.

\*Course ineligible to be repeated for GPA recalculation.  
\*\*Courses offered only at Regional Campuses.

**49890 Applied Geography (3)**

Detailed investigation of application of geographic techniques and knowledge toward problem solving in the "real world." Prerequisite: 10 undergraduate geography (GEOG) credit hours.

**GEOLOGY (GEOL)****11040 Earth Dynamics (3)**

Application of basic concepts and theories of Earth science to the interpretation of Earth materials and dynamic processes (erosion, sedimentation, volcanism, continental drift). Prerequisite: none. This course may be used to satisfy the Liberal Education Requirements (LER).

**11041 Earth Dynamics Laboratory (1)**

Lab study of minerals, rocks, aerial photos, topographic maps and geologic maps. Pre/corequisite: GEOL 11040. This course may be used to satisfy the Liberal Education Requirements (LER).

**11042 Earth History (3)**

Application of basic concepts and theories of Earth science to the interpretation of the origin and evolution of the solar system, the Earth, the structures of the crust and life. Prerequisite: none. This course may be used to satisfy the Liberal Education Requirements (LER).

**11043 Earth History Laboratory (1)**

Lab study of fossils, sedimentary rocks and geologic maps in the framework of interpreting Earth history. Pre/corequisite: GEOL 11042. This course may be used to satisfy the Liberal Education Requirements (LER).

**21061 Glacial Geology (3)**

Origin and movement of glaciers, glacial erosion, transport, nature of glacial drift, Pleistocene stratigraphy, periglacial phenomena and climatic oscillations. Field trips. Three-hour lecture weekly. Prerequisite: GEOL 11041.

**21062 Environmental Geology (3)**

Application of geology to environmental problems including natural resource extraction, water supply, pollution, waste disposal, landslides, floods and land use planning. Field trips. Three-hour lecture weekly. Prerequisite: none. This course may be used to satisfy the Liberal Education Requirements (LER).

**21080 Oceanography (3)**

Introduction to geological, physical, chemical and biological nature of the oceans. Three-hour lecture weekly. Prerequisite: none. This course may be used to satisfy the Liberal Education Requirements (LER).

**23063 Mineralogy (4)**

Occurrence, associations, characteristics, crystallography and crystal chemistry of common minerals. Lab identification emphasizing physical properties. Lecture three hours, lab two hours weekly. Required field trip. Prerequisites: GEOL 11040 and 11041. Pre/corequisite: CHEM 10060.

**31070 Petrology (4)**

Occurrence and origin of igneous, sedimentary and metamorphic rocks. Lab identification, description and classification of hand specimens. Lecture three hours, lab two hours weekly. Required field trip. Prerequisite: GEOL 23063.

**31080 Structural Geology (4)**

Mechanical principles of rock deformation. Structures in sedimentary, igneous and metamorphic rocks. Lecture three hours, lab two hours weekly. Required field trip. Prerequisites: GEOL 31070.

**32066 Geomorphology (4)**

Earth's surface features as functions of geological structures, processes and time. Landform analysis using topographic maps and some stereographic aerial photos. Lecture three hours, lab two hours weekly. Trigonometry recommended. Prerequisites: GEOL 11040 and 11041.

**34061 Invertebrate Paleontology (4)**

Concepts applied to study of commonly preserved invertebrate organisms; identification of common North American fossils. Lecture three hours, lab two hours weekly. Required field trip. Prerequisites: GEOL 11042 and 11043 and either BSCI 20560 or 10120. This course may be used to satisfy the writing-intensive requirement with approval of major department.

**40093 Variable Title Workshop in Geology (1-8)**

(Repeated registration permissible) Workshop or training program focused on a specific professional or disciplinary topic within geology. S/U grading. Prerequisite: special approval.

**40095 Selected Topics in Geology (3)**

Selected topics presented by visiting professors or one-time offerings presented by regular faculty. Prerequisite: 20 credit hours of geology (GEOL) courses.

**40096 Individual Investigation in Geology (1-3)**

Directed field, lab and/or library research. Written report required. Open on special approval of faculty member directing work. Only 3 credit hours will be applied toward baccalaureate degree. Does not count toward geology major. IP grade permissible. Prerequisite: special approval.

**41025 General Geophysics (3)**

Physics of Earth, seismology, geomagnetism, heat flow, radioactivity, geochronology, geotectonic models. Required field trip. Prerequisites: GEOL 31070 and 31080; and MATH 12002; and PHY 13001 or 23101.

**41073 Geology of Ohio (3)**

Minerals, rocks, fossils, structural geology, physiography, environmental geology and geologic resources. Required field trips. Does not satisfy requirements of geology major. Prerequisite: junior standing.

**41075 Geology of the United States (3)**

Distribution of natural regions and geologic features of United States. Geologic concepts illustrated by detailed examination of selected areas. Prerequisite: GEOL 31070 and 31080.

**41077 Geology of the National Parks (3)**

Introduction to the geology of selected major national parks, emphasizing basic geological principles and the processes which have produced the spectacular scenery, rocks and fossils in each park. Not counted toward requirements for a major in geology. Prerequisite: junior standing.

**41079 All About Dinosaurs (3)**

Dinosaurs (and some relatives) and their world, emphasizing how to interpret evidence concerning their history, biology and evolutionary relationships. Does not satisfy requirements of geology major. Prerequisite: none.

**41080 Tectonics and Orogeny (3)**

Introduces advanced concepts of plate tectonics and mountain building with emphasis on Western United States and Appalachians. Required field trip to New England. Prerequisite: GEOL 31080.

**41092 Summer Field Camp (6)**

Five weeks devoted to geologic mapping and solving structural and stratigraphic problems in Black Hills, S.D. Prerequisites: GEOL 31070 and 31080. Special fee—actual cost basis.

**42030 Remote Sensing (3)**

(Cross-listed with GEOG 49230) Emphasis on computer analysis of LANDSAT data using multivariate statistical tools. Introduces statistical methods and use of the computer. Problems in Earth sciences are stressed. Three-hour lecture weekly. Prerequisite: special approval.

**42035 Scientific Method in Geology (3)**

Applying scientific method in the field and lab; models and sampling procedures. Collecting and analyzing data. Formulating and testing hypotheses. Three-hour lecture weekly. Required field trip. Prerequisite: special approval.

\*Course ineligible to be repeated for GPA recalculation.

\*\*Courses offered only at Regional Campuses.

**42067 Introductory Hydrogeology (3)**

Occurrence of groundwater in geologic materials, emphasizing utilization, conservation and management of groundwater resources. Lecture two hours, lab two hours weekly. Prerequisites: MATH 12002 and GEOL 31070 and 32066.

**42068 Contaminant Hydrology and Hydrogeology (3)**

An introduction to the basic principles of chemical and physical behavior of contaminants introduced by humans into the environment. Students are expected to understand concepts and work practical quantitative problems. Prerequisites: GEOL 42067 and CHEM 10060 and 10061 and 10062 and 10063.

**42069 Hydrogeochemistry (3)**

Processes and evolution of the chemical composition of water in the natural hydrologic cycle. Methods of hydrochemical interpretation applied to groundwater and pollution problems. Three-hour lecture weekly. Prerequisites: 10 credit hours of chemistry (CHEM) courses.

**42073 Well Logging (3)**

Application of basic geophysical tools to interpretation of subsurface rocks and fluids, especially oil and gas. Prerequisite: GEOL 31070.

**42078 Engineering Geology (4)**

Engineering properties of soils and rocks. Site evaluation for building foundations, dams, tunnels and highways. Slope stability. Lecture three hours and lab two hours weekly. Prerequisite: Geology (GEOL) majors and junior standing.

**43040 Principles of Geochemistry (3)**

Introduction to chemical thermodynamics and its applications in solving geochemical problems. Distributions of elements and isotopes in the Earth and laws governing these distributions. Prerequisites: GEOL 31070 and MATH 12002 and CHEM 10060 and 10061.

**43066 Optical Petrography (3)**

Theory of optical crystallography and the microscopic examination and identification of igneous, sedimentary and metamorphic rocks in thin section. Lecture two hours, lab two hours weekly. Prerequisite: GEOL 31070.

**44052 Glaciers and Glaciation (3)**

(Cross-listed with GEOG 41052) Examination of how glacial ice masses change the shape of the earth's surface, how they are integral to climate and sea-level change and how they pose high risk hazards. Prerequisite: GEOG 21062 or GEOL 11040.

**44070 Principles of Stratigraphy (4)**

Students are introduced to the principles regarding the systematics of sedimentary rocks and the relationships between geologic formations at various spatial and temporal scales. Lectures are integrated with readings from the open literature and required labs and field trips. Prerequisites: GEOL 31070 and 34061.

**44074 Paleooceanography (3)**

A broad spectrum of geological approaches, including paleontology, geochemistry and stratigraphy, is employed to interpret the history of Earth's oceans. Prerequisite: senior standing and geology (GEOL) major.

**31095 Special Topics (1-3)**

May be repeated when content varies. Topic announced in *Schedule of Classes*. Prerequisite: junior standing.

**31201 Intensive German Grammar (3)**

A systematic approach to German grammar and syntax. Prerequisite: GER 21202.

**31211 German Composition and Conversation (3)**

Grammar review and practice in writing and speaking German. Prerequisite: GER 21202 and 31201.

**31215 German Phonetics and Diction (3)**

Study of the German sound system with emphasis on pronunciation and intonation. Reading and performance of a series of skits and short plays. Prerequisite: GER 21202.

**31231 Translation Practice: German (1)**

Translation practice with German texts using principles and techniques learned in the lecture class. Corequisite: MCLS 30230.

**31240 Conversation for Business and Special Purposes: German (3)**

Introduction to the special vocabulary of business and other special subject areas; introduces the concept of language for special purposes and emphasizes the use of special vocabulary in conversations in business and other settings. Prerequisite: GER 31211.

**31303 Introduction to German Literature (3)**

Introduction to German literature and textual analysis. Prerequisites: GER 21202 and 31201.

**31421 German Civilization (3)**

A survey of German history and intellectual life to 1918; taught in German. Prerequisite: 6 credit hours upper-division German (GER) courses.

**31501 German Literature in English Translation (3)**

Reading and analysis of major works of German literature in English translation. No knowledge of German required. May not be counted toward the major or minor. Prerequisite: junior standing.

**41095 Special Topics (1-4)**

(Repeated registration permissible when content varies) Topic announced in *Schedule of Classes*. Prerequisite: senior standing.

**41096 Individual Investigation (1-3)**

Independent investigation of problems in German language or literature. IP grade permissible. Prerequisites: 6 credit hours of upper-division German (GER) and special approval of the department chairperson.

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**GERMAN (GER)**

*For placement and credit in foreign language courses see Arts and Sciences—Foreign Language Requirement—Placement and Credit.*

*The following course is taught in English and does not presuppose a preparation in the language in question: German 31501.*

**11201 Elementary German I (4)**

An introduction to the German language in the context of the cultures of German-speaking lands. Prerequisite: none.

**11202 Elementary German II (4)**

A continuation of the introduction to the German language in the context of the cultures of German-speaking lands. Prerequisite: GER 11201.

**21201 Intermediate German I (3)**

Continued development of speaking, listening, reading and writing skills using a variety of cultural materials. Prerequisite: GER 11202.

**21202 Intermediate German II (3)**

Continuation of GER 21201. Prerequisite: GER 21201.

**23531 Yiddish Short Story (3)**

Introduction to Yiddish short stories in English translation with a special emphasis on works by Aleichem, Peretz and Mendele. Prerequisite: sophomore standing.

**23532 Yiddish Drama (3)**

Examines representative Yiddish dramas which reflect the Yiddish-speaking society. They further depict the religious and political conflicts of this society with its Gentile neighbors. Prerequisite: sophomore standing.

\*Course ineligible to be repeated for GPA recalculation.  
\*\*Courses offered only at Regional Campuses.

**41211 Advanced German Composition and Conversation (3)**  
Advanced practice in speaking and writing German. Prerequisite: GER 31211.

**41216 Contemporary German Culture (3)**  
A study of selected sociological, political, cultural and economic issues in contemporary German-speaking countries, using readings, films and legal documents as the basis for discussions. Taught in German. Prerequisite: 6 credit hours upper-division German (GER) courses. This course may be used to satisfy the writing-intensive requirement with approval of major department.

**41230 Advanced Translation Practice: German (3)**  
Theory and practice course that discusses translation theory and emphasizes German-to-English translation of selected texts in business, technology, medicine and law. Prerequisite: GER 31231. This course may be used to satisfy the writing-intensive requirement with approval of major department.

**41240 Business and Special Texts: German (3)**  
Survey of the typical text types of business in the German culture and language. Practice sessions focus on reading and understanding specialized texts, and on the translation and composition of selected special texts in German. Prerequisite: GER 31211.

**41330 Twentieth-Century German Authors (3)**  
A survey of the major movements and authors of the 20th century. Prerequisite: special approval. This course may be used to satisfy the writing-intensive requirement with approval of major department.

**41331 History of German Literature (4)**  
History of the development of German literature from 750 to the present. Prerequisite: special approval.

**41332 German Literature by Women (3)**  
Readings of works by female German authors. Taught in German. Prerequisite: junior standing.

**41334 The German Novella (3)**  
Development of the German novella from the 18th-century to the present. Readings of major works, lectures, analyses; taught in German. Prerequisite: special approval.

**41335 German Drama (3)**  
An examination of the development of the drama in Germany, Austria and Switzerland. Taught in German. Prerequisite: 6 credit hours of upper-division German (GER) courses.

**41338 German Poetry (3)**  
An examination of the nature of poetry with particular attention to its development in Germany, Austria and Switzerland. Taught in German. Prerequisite: 6 credit hours of upper-division German (GER) courses.

**41365 Classical German Literature (3)**  
Reading and critical analysis of major works of the Classical Age with emphasis on Goethe. Prerequisite: special approval. This course may be used to satisfy the writing-intensive requirement with approval of major department.

**41399 Research Project in German Literature (3)**  
Thesis or other independent study. IP grade permissible. Prerequisite: 6 credit hours of German (GER) at the 40000 level.

**41731 Survey of German Cinema (3)**  
A survey of major contributions to the German cinema from the beginnings to the present; taught in German. Prerequisite: 6 credit hours of upper-division German (GER) courses.

## GERONTOLOGY (GERO)

**14029 Introduction to Gerontology (3)**  
An interdisciplinary approach to the aging process. Experiences with older members of the community are included. Prerequisite: none. This course may be used to satisfy the Liberal Education Requirements (LER) and diversity requirement.

**41093 Variable Topic Workshop in Gerontology (1-3)**  
Workshop setting dealing with a topic or topics in aging. Learning experiences are provided in a wide range of areas. S/U grading. Prerequisite: none.

**41095 Special Topics in Gerontology (1-4)**  
Discussion of a major topic within a specific field of gerontology. Prerequisite: none.

**41096 Individual Investigation (1-3)**  
Independent study in gerontology. Prerequisite: written special approval from instructor.

**44030 Adult Development and Aging (3)**  
Examines developmental processes across adulthood. Evaluation of theoretical models and scientific literature. Prerequisite: human development and family studies (HDFS) majors only. This course may be used to satisfy the writing-intensive requirement with approval of major department.

**44031 Social Policy and Community Resources for Older Adults (3)**  
Overview of national, state and local public policy affecting older adults. Legislation, funding, planning and the service delivery system are examined. Prerequisite: GERO 44030.

**44092 Practicum in Gerontology (3-10)**  
(Repeatable for a total of 20 credit hours) Observation and participation in long-term care of community agencies. One class discussion per week. S/U grading. Prerequisites: human development and family studies (HDFS) majors and senior standing.

## GREEK (GRE)

*For placement and credit in foreign language courses see Arts and Sciences—Foreign Language Requirement—Placement and Credit.*

**14201 Elementary Classical Greek I (4)**  
An introduction to the classical Greek language in the context of ancient Greek culture. Prerequisite: none.

**14202 Elementary Classical Greek II (4)**  
A continuation of the introduction to the classical Greek language in the context of ancient Greek culture. Prerequisite: GRE 14201.

**14205 Elementary Modern Greek I (4)**  
An introduction to the modern Greek language in the context of Greek culture. Prerequisite: none.

**14206 Elementary Modern Greek II (4)**  
A continuation of the introduction to the modern Greek language in the context of Greek culture. Prerequisite: GRE 14205.

**24201 Intermediate Classical Greek I: Readings (3)**  
Excerpts from classical Greek literature with emphasis on translation into English. Prerequisite: GRE 14202.

**24202 Intermediate Classical Greek II: Readings (3)**  
Excerpts from classical Greek literature with emphasis on both prose (e.g., Plato) and poetry (e.g., Euripides). Prerequisite: GRE 24201.

**24208 Intermediate Modern Greek I (3)**  
Continued development of speaking, listening, reading and writing skills using a variety of cultural materials. Prerequisite: GRE 14206.

**24209 Intermediate Modern Greek II (3)**  
Advanced readings in prose and poetry, emphasizing such 20th-century demotic authors as Nikos Kazantzakis, Elias Venezis, George Seferis and Constantine Cavafy. Prerequisite: GRE 24208.

**34350 Advanced Prose Authors (3)**  
Selections from major prose authors. Emphasis on Attic orators and the contributions of rhetoric; also readings from ancient Greek historians, especially Thucydides. Prerequisite: GRE 24202.

**34351 New Testament in Greek (3)**  
Selected New Testament readings in the original language, including the Gospels and the letters of Paul. Prerequisite: GRE 24202.

**34370 Plato: Apology and Phaedo (3)**  
Readings in the original Greek of Plato's dialogues centering on the trial, conviction and death of Socrates. Prerequisite: GRE 24202.

**34371 Homer (3)**  
Selections from the *Iliad* or *Odyssey* studied from a literary and grammatical standpoint. Prerequisite: GRE 24202.

**40393 Variable Title Workshop (1-6)**  
Workshops individually designed to provide instruction and training in specific areas of Greek studies. S/U grading. Prerequisite: departmental special approval.

**44096 Individual Investigation (1-3)**  
Investigation of problems in Greek literature or linguistics. IP grade permissible. Prerequisite: departmental special approval.

**44352 Greek Drama (3)**  
Selections from Aeschylus, Sophocles or Euripides with discussion of Greek dramatic technique and influence. Prerequisite: GRE 24202.

## HEALTH EDUCATION (HED)

**11570 Personal Health (3)**  
This course examines the leading causes of death and disability in the United States with an emphasis on the application of knowledge and skills to reduce risk and enhance the quality of life. Prerequisite: none.

**11590 Community Health (3)**  
Identification of community health problems and measures for control. Emphasizes principles, objectives and methods of community health planning. This course includes five field/clinical hours. Prerequisite: none.

**13510 Winning Combination: Health and Athletes (1)**  
An exploration of strategies for promoting healthy lifestyles for athletes. The course is reserved for varsity athletes. Prerequisite: special approval.

**14020 Medical Terminology (3)**  
Identification of the meaning of various roots and terms and combining forms that are components of medical words, including anatomical, physiological and pathological therapeutic terminology, and implications for health literacy. Prerequisite: none.

**20000 Health Education for Early Childhood Educators (3)**  
Investigate current health issues relevant to children in preschool environments/primary grades; identify educational strategies to increase student health knowledge, foster positive health attitudes and promote healthy behaviors. Prerequisite: none.

**21030 Introduction to Health Education (3)**  
This course introduces the student to the health education profession. Roles and responsibilities of health educators in a variety of occupational settings are described. Prerequisite: none.

**21050 Health Behavior (3)**  
Application of various attitude and behavior models to health and illness behavior in order to develop a framework for educational intervention. This course includes five field/clinical hours. Prerequisite: none.

**32530 Drug Use and Misuse (3)**  
Introduction to the study of drug/alcohol abuse. Basic pharmacology of drug actions is reviewed. Common myths/misconceptions about drug/alcohol use are examined. Current drug problems and related prevention/treatment issues are analyzed. Prerequisite: none.

**32542 Methods and Applications of Health Education (5)**  
Analysis observation, demonstration and experience in the teaching-learning process utilizing methods, materials and resources appropriate to the preparation of professional health educators. This course includes 50 field/clinical hours. Prerequisites: HED 11570 and 11590. This course may be used to satisfy the writing-intensive requirement with approval of major department.

**32544 Human Sexuality (3)**  
A study of the role and meaning of human sexuality throughout the life cycle for self and society. Prerequisite: none.

**32565 Marketing in Health Education (3)**  
Examines the basic elements of marketing processes as they relate to promoting health in communities. Emphasis on application of marketing/planning concepts and practices for service providers involved with health education. Prerequisite: none.

**32575 Consumer Health (3)**  
An overview of the health marketplace including health products, services, financing, promotional practices and consumer protection laws. Prerequisite: none.

**34050 Program Planning and Evaluation in Health Education (3)**  
Provides students with the knowledge and skills to assess health resources and needs, develop health programs to meet specific needs in particular populations and determine appropriate measures to evaluate the effectiveness of health programs. Prerequisites: HED 11590 and 32542.

**34060 Small Group Processes (2)**  
(Cross-listed with CHDS 37800) Group processes in human relationships, including techniques of democratic leadership and effective group membership. This course includes 25 field/clinical hours. Prerequisite: none.

**36048 Emergency Medical Training (5)**  
Basic immediate care procedures for victims of acute illnesses and accidents. Course does not conform to EMT-B National Standard Curriculum as adopted by the Ohio Department of Public Safety, Division of EMS. Prerequisite: special approval required. Special fee: \$4/credit hour—subject to change.

**40093 Variable Title Workshop in Health Education and Promotion (1-3)**  
Discussion of major issues in health and safety education. Content, emphasis and prerequisites vary depending on workshop. S/U grading. Prerequisites: HED 11590 and special approval.

**41561 Environmental Health (3)**  
Effects on human health of overpopulation and various sources of energy and the resultant environmental pollutants. Consideration of alternatives and solutions. Prerequisite: HED 11570.

**42041 Health Counseling (3)**  
Techniques of counseling applied to health education. Individual and group approaches relative to personal, family and societal health issues. This course includes 20 field/clinical hours. Prerequisite: none.

**42358 Student Teaching in Health Education (9)**  
Provides a twelve week student teaching experience. See Student Teaching section of the *Catalog*. S/U grading. Prerequisite: eligibility for admission to student teaching and admission to advanced study.

**42575 Health and Learning: Strategies for Students and Teachers (3)**  
Focus on health issues/education/environment policy and practice strategies to respond to threats confronting students utilizing a coordinated school/community strategy to promote health to improve academic outcomes. CPR and first aid certification required for completion of course. Prerequisite: admission to advanced study.

**42580 Professional Issues in Health Education (2)**  
Career preparation through investigation of professional role, standards, issues in work settings. Prerequisite: HED 44095.

**44025 Women's Health Issues (3)**  
Traditional and feminist analysis of women's health issues and the health educational responses to those issues. Prerequisite: none.

**44092 Internship in Community Health Education (12)**  
Participation for one academic semester in the health education activities of an approved agency, organization or industry. IP grade permissible. Prerequisites: senior standing and special approval.

**44095 Special Topics: Health Education and Promotion (1-3)**  
Selected topics related to public health issues facing professionals in communities, schools, health care settings and the worksite. Prerequisite: none.

**44096 Individual Investigation in Health Education and Promotion (1-3)**  
Independent reading and/or research directed by a HED faculty member. S/U grading; IP grade permissible. Prerequisite: special approval.

**44543 Administration of School Health Programs (3)**  
Organizational design and administration of a comprehensive school health program including health services, instruction and environment. This course includes 25 field/clinical hours. CPR and first aid certification required for completion of course. Prerequisite: admission to advanced study.

**44544 Sexual Health Promotion Programs (3)**  
This course prepares the student to develop, implement and evaluate sexuality education programs in school and community settings. Prerequisite: HED 32544.

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**44550 Drug Abuse and Violence Prevention (3)**  
Drug abuse and violence prevention from theoretical, philosophical, empirical and practical perspectives. Application of etiological theories to planning prevention programs. Prerequisite: HED 32530.

**46052 Stress: Recognition and Management (2)**  
An examination of stress, its role as a predisposing factor for various illnesses and diseases, types of stressors and the body's reaction to stress, as well as techniques for recognizing, preventing and reducing stress. Prerequisite: none.

**44565 Health Data Analysis and Presentation (3)**  
Analysis, interpretation and presentation of data utilized in epidemiological surveillance and evaluation. Application of statistical and graphic computer programs in this area. Prerequisite: none.

**46057 Advanced Human Sexuality (3)**  
Selected aspects of human sexuality; history, cross-cultural perspectives, medical/surgical conditions and sex therapy and counseling. Prerequisite: HED 32544.

**46060 Death Education (3)**  
Issues of living with the human experiences of death and facilitating understanding with selected client systems in schools and community agencies. Prerequisites: HED 11570 and PSYC 11762.

**46070 Health Related Aspects of Aging (3)**  
Theories of biological aging and identification of major health hazards, age-related diseases and age changes, their prevention and control. The health care delivery system for the elderly. Prerequisite: none.

**47070 AIDS: Issues, Education and Prevention (3)**  
This course provides an extensive overview of the Human Immunodeficiency Virus epidemic as it has developed and exists today. A particular emphasis will be given to AIDS education and prevention issues and strategies. Prerequisite: none.

**47091 Current Issues in Health Education and Promotion (1-3)**  
Public health issues facing professionals in communities, schools, health care settings and the worksite. Prerequisite: junior or senior standing.

**48092 Field Experience in Health Education and Promotion (1-3)**  
Observation and participation in educational and promotional activities of a public health agency, school or health care facility. Joint university-agency supervision. S/U grading; IP grade permissible. Prerequisite: special approval.

**49525 Inquiry Seminar into Professional Practice (3)**  
Interdisciplinary inquiry into teaching as a professional practice in health education; emphasis on teacher as disciplined investigator. Final semester of four. Utilization of teaching/learning technology. Prerequisite: EDPF 39525 and admission to advanced study. Corequisite: HED 42358.

## HEBREW (HEBR)

*For placement and credit in foreign language courses see Arts and Sciences—Foreign Language Requirement—Placement and Credit.*

**12101 Elementary Hebrew I (4)**  
An introduction to the modern Hebrew language in the context of Israeli culture. Prerequisite: none.

**12102 Elementary Hebrew II (4)**  
A continuation of the introduction to the modern Hebrew language in the context of Israeli culture. Prerequisite: HEBR 12101.

**22104 Intermediate Hebrew I (3)**  
Continued development of speaking, listening, reading and writing skills using a variety of cultural materials. Prerequisite: HEBR 12102.

**22105 Intermediate Hebrew II (3)**  
Continuation of HEBR 22104. Prerequisite: HEBR 22104.

## HERITAGE LANGUAGES (HRTG)

*For placement and credit in heritage foreign language courses see Arts and Sciences—Foreign Language and Placement and Credit. Individual language(s) will be specified in the Schedule of Classes.*

**10101 Elementary I (Variable Language) (4)**  
An introduction to a heritage language in the context of the culture of its speakers. Prerequisite: none.

**10102 Elementary II (Variable Language) (4)**  
A continuation of the introduction to a heritage language in the context of the culture of its speakers. Prerequisite: HRTG 10101 and special approval.

**20201 Intermediate I (Variable Language) (3)**  
Continued development of speaking, listening, reading and writing skills using a variety of cultural materials. Prerequisite: HRTG 10102 and special approval.

**20202 Intermediate II (Variable Language) (3)**  
Continuation of HRTG 20201. Prerequisite: HRTG 20201 and special approval.

\*Course ineligible to be repeated for GPA recalculation.

\*\*Courses offered only at Regional Campuses.

**30095 Special Topics (1-3)**

(Repeated registration permissible) Topic announced in *Schedule of Classes*. Prerequisite: special approval.

## HIGH TECHNOLOGY MANUFACTURING TECHNOLOGY (HTMT)\*\*

**13600 Electronic Materials (2)**

Introduction to electronic properties and structure of semiconductor materials, micro-machines, sensors and packaging materials. Prerequisite: CHEM 10060 and 10062.

**13601 Introduction to Photonics and Fiber Optics (3)**

Introduction to fiber optics and photonic components/systems, devices and optical communications. Prerequisite: special approval.

**13602 Introduction to Lasers (3)**

Introduction to laser theory, operation, and operating practices and its output characteristics. Usage of low-power helium-neon lasers and safety considerations. Prerequisite: special approval. Special fee: \$45 flat fee—subject to change.

**13603 Lasers and Electro-Optic Components and Devices (3)**

The laser technology tools, special purpose devices and measuring tools are discussed. Prerequisite: special approval. Special fee: \$45 flat fee—subject to change.

**23600 Semiconductor Manufacturing I (3)**

Study of semiconductor manufacturing. An emphasis on "clean room" operations will be studied. Topics include oxidation, photolithography, photomasking, etching, doping, deposition, metallization and packaging. Prerequisite: HTMT 13600. Special fee: \$60 flat fee—subject to change.

**23601 Semiconductor Manufacturing II (3)**

An overview knowledge of wafer fabrication operations is the goal. A team project will require complete technical report emphasizing quality control, integration of electronics, etc. Prerequisite: HTMT 23600. Special fee: \$60 flat fee—subject to change.

**23602 Photolithography in IC Fabrication (2)**

Introduction to light and optical systems used in photolithographic processes and equipment in semiconductor manufacturing using PC Board Design Software and electronic assembly. Corequisite: HTMT 23600.

**23603 Light Sources and Wave Optics (3)**

Study of the generation and measurement of light and the wave nature of light from the viewpoint of wave optics including optical materials. Prerequisite: sophomore standing.

\*Course ineligible to be repeated for GPA recalculation.

\*\*Courses offered only at Regional Campuses.

**23604 Vacuum System Technology (2)**

Study of vacuum technology with emphasis on application to semiconductor manufacturing. Terminology, measurement techniques, operation and application of vacuum equipment, leak detection and troubleshooting are presented. Prerequisite: PHY 12201.

**23606 Power Radio Frequency (2)**

Study of vacuum radio frequency energy and its application in the manufacturing industry. Topics include plasma physics, RF applications, safety, RF generators, transmission lines and RF interference. Prerequisites: PHY 12202 and EERT 12010. Special fee: \$60 flat fee—subject to change.

**23607 Laser Technology: Applications (3)**

Study and application of laser technology in industry, manufacturing and medicine, including laser safety and hazard evaluation. Prerequisite: sophomore standing.

**23695 Special Topics (1-3)\***

(Repeated registration permissible) Special topics in lasers, photonics or semiconductor technology. Topics announced when scheduled. Prerequisite: sophomore standing.

## HISTORY (HIST)

**11050 History of Civilization I (3)**

World history from early human societies through the mid-17th century. Prerequisite: none. This course may be used to satisfy the Liberal Education Requirements (LER) and diversity requirement.

**11051 History of Civilization II (3)**

Continuation of HIST 11050. World history from mid-17th century to the present. Prerequisite: none. This course may be used to satisfy the Liberal Education Requirements (LER) and diversity requirement.

**12070 History of the United States: The Formative Period (3)**

A survey of United States history through 1877. Prerequisite: none. This course may be used to satisfy the Liberal Education Requirements (LER) and diversity requirement.

**12071 History of the United States: The Modern Period (3)**

A survey of United States history since 1877. Prerequisite: none. This course may be used to satisfy the Liberal Education Requirements (LER) and diversity requirement.

**31009 History of Byzantine Civilization (3)**

The Byzantine Empire and its culture from the foundation of Constantinople to the Turkish Conquest (A.D. 330-1453). Prerequisite: none.

**31024 World War II (3)**

Survey of one of the greatest political and military events in history, focusing especially on causes, and major personalities and chief political, ideological, moral, scientific and diplomatic aspects. Prerequisite: none.

**31027 History of England to 1688 (3)**

Survey of medieval and early modern England. Topics include Norman Conquest, medieval culture and society, Reformation, Age of Elizabeth, English Revolution. Prerequisite: none.

**31028 England Since 1688 (3)**

Survey of national development from the Glorious Revolution through the Second World War, with special attention to leaders, prominent individuals, and problems of change. Prerequisite: none.

**31029 History of the British Empire and Commonwealth Since 1815 (3)**

Survey of British colonialism and nation-building with an emphasis on Canada, Australia, Ireland, India and South Africa. Prerequisite: none.

**31030 NATO: The Enduring Alliance (3)**

Examination of the historical and contemporary roles of the North Atlantic Treaty Organization. Prerequisite: junior standing or special approval of instructor.

**31050 History and Society of Modern Greece (3)**

Study of Modern Greece concentrating on political, economic, cultural and societal developments since 1821. Prerequisite: none.

**31051 Romanian Civilization (3)**

Survey of major features of Romanian civilization from antiquity to modern era. Prerequisite: none.

**31052 History of Modern France (3)**

Survey of French history from 1815 to the present. Topics include industrialization, republicanism and revolution, the experience of war and defeat, empire and decolonization. Prerequisite: none.

**31061 History of Ohio (3)**

Prerequisite: none.

**31070 History of American Business Enterprise (3)**

An analysis of American business institutions, practices and leadership from the Colonial period to the present. Prerequisite: none.

**31080 African American History:  
Slavery to Freedom (3)**

(Cross-listed with PAS 33101). Survey of African American history from the colonial period to 1877. Course provides a general knowledge of the social, political and cultural history of African Americans from colonial times to the end of the Reconstruction. Prerequisite: none.

**31081 African American History:  
Reconstruction to the Present (3)**

(Cross-listed with PAS 33102). Survey of African American history from 1877 to the present. Course provides a general knowledge of the social, political and cultural history of African Americans from the end of the Reconstruction to the present. Prerequisite: HIST 31080 or PAS 33101.

**31112 Chinese Civilization (3)**

General survey of evolution of Chinese civilization from the Bronze Age to the rise of communism. Prerequisite: none.

**31118 Vietnam War (3)**

Study of the causes, evolution and effects of warfare in Vietnam from 1946 to 1975, with special attention to colonialism, nationalism, communism and American intervention. Prerequisite: none.

**31125 Zionism and Israel (3)**

Describes history of the Zionist movement from religious, ideological and political viewpoints and the relationship between Zionism and the state of Israel. Prerequisite: none.

**31126 History of the Middle East (3)**

A survey of Islamic civilization in Middle Eastern context from the earliest days to the present. Prerequisite: none.

**31127 Ancient and Early Medieval Jewish  
History (3)**

Deals with the ancient and early medieval Jewish history from approximately 2000 B.C. to approximately A.D. 1200. Prerequisite: none.

**31128 Late Medieval and Modern Jewish  
History (3)**

Survey of Jewish history in Europe and the Middle East from the age of the Crusades to the 20th century. Prerequisite: none.

**31130 History of African Civilization (3)**

Survey of cultural, political, social and economic history of Africa from antiquity to European conquest. Emphasis on precolonial. Prerequisite: none.

**31140 Modern Latin America (3)**

Focuses on 20th-century Latin America and the efforts by social classes and their political leaderships to overcome obstacles of underdevelopment. Emphasis on Argentina, Brazil, Chile, Mexico, Cuba and Central America. Prerequisite: none. This course may be used to satisfy the diversity requirement.

**31141 Early Latin America (3)**

Examines Latin America from precolonial times to the late 19th century. Lectures emphasize political and economic questions while readings focus on social history. Prerequisite: none.

**31143 The African-Brazilian Experience in  
Culture and Literature (3)**

(Cross-listed with MCLS 37143 and PAS 37143) Interdisciplinary approach to the study of the African-Brazilian experience, from the colonial period to the present, as reflected in selected literary, sociocultural and historical texts. Course taught in English. Prerequisite: junior standing. This course may be used to satisfy the diversity requirement.

**32050 The Historian's Craft (3)**

Introduction to the practice of history, with a focus on basic research methods and the systematic production of a research paper. Prerequisite: history (HIST) major and 6 credit hours in history (HIST). This course may be used to satisfy the writing-intensive requirement with approval of major department.

**38095 Selected Topics in History (3)**

Special history course, varying in accordance with desire and competence of faculty. Precise title to be inserted in *Schedule of Classes*. Prerequisite: none.

**38997 Colloquium in History (3)**

Various philosophical and methodological approaches to the study of history are considered. Required for those seeking to graduate with honors in history. Prerequisite: none.

**40092 Internship in History (3)**

Student internship at an institution related to the history major (e.g., historical society, museum, archives, historic preservation organization). S/U grading. Prerequisite: junior standing

**40093 Workshop in History (1-6)**

Special workshop in history. Topic will vary according to professor. S/U grading. Prerequisite: none.

**40197 American Cultural Heritage: the Arts and  
Society (3)**

Examination of music, painting and literature in their cultural contexts during four periods of American history. American studies methodology and interdisciplinary thought. Prerequisites: junior standing and one prior course in history (HIST).

**41000 Introduction to Public History (3)**

A survey of public history including: archives; editing; museums and historical agency administration; historic preservation; and related skill areas (e.g., artifact analysis, oral history). Prerequisite: junior standing.

**41003 History of Ancient Greece (3)**

Survey of Greek history from the Bronze Age to the rise of Macedonia and Alexander the Great. Prerequisite: junior standing.

**41004 Hellenic Contributions to Western  
Civilization (3)**

Major intellectual and cultural achievements of the Greeks—ca. 800-350 B.C. Prerequisite: junior standing.

**41006 Roman History (3)**

(Cross-listed with CLAS 41006) A survey of Roman history from its beginnings to the fall of the Roman empire. Prerequisite: junior standing.

**41010 The Early Middle Ages (3)**

Survey of major political, social and cultural developments of Europe from the fourth through 10th centuries. Prerequisite: junior standing.

**41011 The High Middle Ages (3)**

Survey of political, social and cultural developments of Europe from 11th through 13th centuries. Prerequisite: junior standing.

**41014 Europe in the Renaissance (3)**

Analysis of the various factors leading Europe from a rural, feudal, ecclesiastical society to one characterized by urbanism, trade, secularism and the state. Prerequisite: junior standing.

**41016 The Protestant and Catholic  
Reformations (3)**

Comprehensive course dealing with the religious, political, economic and social change accompanying the religious upheavals of the 16th century. Prerequisite: junior standing.

**41017 Seventeenth-Century Europe (3)**

This course will analyze those political, economic, social, religious and intellectual factors leading to economic crisis and civil wars in Europe. Prerequisite: junior standing.

\*Course ineligible to be repeated for GPA recalculation.

\*\*Courses offered only at Regional Campuses.

**41018** *Eighteenth-Century Europe: Age of Revolution (3)*

This course will analyze the many different factors and unresolved crises of the 17th century that led to revolution throughout Europe. Prerequisite: junior standing.

**41020** *Nineteenth-Century Europe (3)*

Focus on industrialization and social transformation, political upheavals, intellectual thought, nationalism, and foreign policy in Great Britain, France, Prussia and Austria. Prerequisite: junior standing.

**41024** *Modern European History, 1914-1945 (3)*

Special attention paid to the two world wars, Bolshevik Revolution, rise of fascism and fate of European Jewry. Prerequisite: junior standing.

**41025** *Modern European History: 1945-Present (3)*

Survey of European political, economic, social and cultural developments since 1945. Prerequisite: junior standing.

**41026** *Tudor England 1485-1603 (3)*

Early Modern England with emphasis on Renaissance, Reformation, social change and the Tudor monarchs, Henry VIII and Elizabeth. Prerequisite: junior standing.

**41028** *Hanoverian England (3)*

England under first three Georges, with stress on growth of political parties, duel for world empire and the French and Industrial revolutions. Prerequisite: junior standing.

**41031** *Modern British Intellectual History (3)*

British social, political and aesthetic thought since 1700. Prerequisite: junior standing.

**41040** *History of Germany, 1648-1871 (3)*

Focuses on the rise of Prussia, the cultural revival of the 18th century, the impact of the French Revolution and the process of unification. Prerequisite: junior standing.

**41041** *History of Germany, 1871-Present (3)*

Focuses on the impact of industrialization, the dilemma of the German left, the rise of Nazism and the emergence of two German states after 1945. Prerequisite: junior standing.

**41044** *Imperial Russia, 1689-1917 (3)*

Study of the entire imperial period, with focus on modernization, state institutions, nationalities, social groups and estates, economy, politics and ideologies, and elite and popular culture. Prerequisite: junior standing.

**41045** *Modern Russia, 1917-Present (3)*

Focus on 1917 revolutions; Civil War; nationalities question; NEP, collectivization; Great Terror; World War II; Cold War; Soviet Foreign policy and culture; Perestroika; and post-Soviet economic, political and ideological changes. Prerequisite: junior standing.

**41049** *History of the Balkans: 18th Century-1914 (3)*

Survey of Albanians, Bulgarians, Greeks, Romanians and South Slavs under Ottoman domination and their struggles for national independence. Prerequisite: junior standing.

**41050** *History of the Balkans: 1914 -Present (3)*

The Balkans since 1914, including coverage of post-World War II period. Prerequisite: junior standing.

**41051** *Politics, Culture and Society of 20th-Century Europe (3)*

Political, social and cultural change in Europe during the 20th century. Topics include violence, war, revolution, economic crises and social and political change. Prerequisite: junior standing.

**41056** *History of Colonial America: 1492-1714 (3)*

Major patterns of thought and behavior among Spanish, French and English expansionists; English colonization to 1714. Prerequisite: junior standing. This course may be used to satisfy the diversity requirement.

**41057** *Eighteenth-Century America: 1714-1789 (3)*

Cultural development of English Colonies; Great War for Empire; American Revolution and Constitution. Prerequisite: junior standing. This course may be used to satisfy the diversity requirement.

**41058** *Jefferson-Jackson Era, 1789-1848 (3)*

Study of the founding and development of the American nation, especially the periods of Jefferson and Jackson. Prerequisite: junior standing.

**41062** *The United States: The Westward Movement (3)*

The process of settlement from its beginnings; consequences for American history. Prerequisite: junior standing.

**41065** *Sectional Conflict and Civil War (3)*

Differences within the United States, including the controversy over slavery; the Civil War in all its aspects. Prerequisite: junior standing.

**41066** *Reconstruction and the Later South (3)*

Controversy during and after the Civil War as to racial and sectional relationships; the post-Reconstruction compromises and their undoing. Prerequisite: junior standing.

**41070** *American Social and Intellectual History 1790-1876 (3)*

Major currents of the period: Social background of the early republic; religious development; impact of the frontier; abolition. Prerequisite: junior standing. This course may be used to satisfy the diversity requirement.

**41071** *American Social and Intellectual History, 1876-Present (3)*

Continuation of HIST 41070. Development of social Darwinism, racism, pragmatism, popular arts. Prerequisite: junior standing. This course may be used to satisfy the diversity requirement.

**41072** *American Military History, 1775-1900 (3)*

Survey of American military history from its Colonial origins to 1900. Prerequisite: junior standing.

**41073** *American Military History, 1900-Present (3)*

Survey of American military history from 1900 to the present. Prerequisite: junior standing.

**41074** *American Economic History (3)*

Survey of growth and development of American economic and business life from Colonial times to the present. Prerequisite: junior standing.

**41075** *War and Society in the United States from 1607 through 1865 (3)*

An examination of the impact of conflict and the military upon the society, culture, economy and diplomacy of the United States. Topics include colonial Indian wars, the Revolutionary War, the War of 1812, the Mexican-American War and the Civil War. Prerequisite: HIST 12070.

**41076** *War and Society in the United States from 1865 to Present (3)*

An examination of the impact of conflict and the military on society, culture, economy and diplomacy of the United States. Topics include the frontier Army, the Spanish-American War and empire in the Pacific, the two world wars, the Cold War and the War on Terror. Prerequisite: HIST 12071.

**41079** *History of the Immigrant in America (3)*

Impact of, primarily, European immigrants on America from the 17th century to the present and the influence, in turn, of America on the immigrants. Prerequisite: junior standing.

\*Course ineligible to be repeated for GPA recalculation.

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41082 *Constitutional History of the United States (3)*

Prerequisite: junior standing.

41083 *U.S. Foreign Relations Through World War I (3)*

The evolution of U.S. foreign policy from its Colonial origins through the Paris Peace Conference of 1919 with special emphasis on the domestic roots of foreign policy. Prerequisite: junior standing.

41084 *U.S. Foreign Relations From 1920 (3)*

The history of U.S. foreign policy from the 1920s on with special emphasis on the evolving role of America as a world power. Prerequisite: junior standing.

41087 *Progressive America: The United States, 1896-1919 (3)*

Major political, economic, social, cultural and diplomatic events from the crisis of the 1890s through World War I. Prerequisite: junior standing.

41088 *New Era Through World War: The United States, 1920-1945 (3)*

Major political, economic, social, cultural and diplomatic events from the New Era of the 1920s through World War II. Prerequisite: junior standing.

41089 *Recent America: The United States, 1945-Present (3)*

Examines everyday life and culture, assesses the degree to which presidents and their administrations are the reflections of their constituencies, and evaluates the significant events and themes of U.S. history since 1945. Prerequisite: junior standing.

41097 *Colloquium: Saints, Monks, and the Medieval Community (3)*

Investigates major religious institutions that shaped medieval European society and the impact on popular piety. Prerequisite: junior standing.

41112 *History of Modern China (3)*

Disintegration of the Chinese empire amid Western challenge and internal disorder and the subsequent rise of communism. Prerequisite: junior standing.

41114 *Economic History of East Asia in Modern Times (3)*

Contrast between China and Japan in their efforts toward industrialization since the mid-19th century. Prerequisite: junior standing.

41116 *History of Japan (3)*

General survey of the development of Japan from a loose confederation of clans to a modern industrial state. Prerequisite: junior standing.

41129 *The Holocaust: The Destruction of European Jewry, 1938-1945 (3)*

Analysis of those political, economic, social and intellectual factors leading to systematic destruction of European Jewry during World War II. Prerequisite: junior standing.

41131 *History of Africa to 1880 (3)*

Prerequisite: junior standing.

41132 *History of Africa, 1880-Present (3)*

Prerequisite: junior standing.

41135 *History of West Africa (3)*

Prerequisite: junior standing.

41142 *Independence in Latin America (3)*

A study of revolutions and wars through which Spanish America achieved its independence as well as the peaceful separation of the Brazilian Empire from Portugal. Prerequisite: junior standing.

41143 *Twentieth-Century Mexico (3)*

Beginning with the 1910 Mexican Revolution and concluding with the present administration, this course focuses on domestic and international events which have shaped present-day Mexico. Prerequisite: junior standing.

41789 *The French Revolution and Napoleon (3)*

Analysis of the causes of revolution in France, political, ideological and social conflict in the construction of French democracy, expansion of the revolution outside of France. Prerequisite: senior standing.

42140 *The Sixties: A Third World View (3)*

Examines the political, social and cultural upheaval of the 1960s in Latin America, Africa and Asia. Prerequisite: junior standing.

42141 *Comparative Third World Revolutions (3)*

Examinations of 20th-century revolutions in Latin America, Africa and Asia, focusing on ideologies and political leadership. Prerequisite: junior standing.

42142 *Afro-Latin America (3)*

(Cross-listed with PAS 43300). Focuses on the social, cultural and political life of the African population of Latin America, from 19th century slaves to shantytown dwellers of megacities such as Rio de Janeiro. Topics include black resistance to racism, race mixture in multicultural societies, and how employment, political participation and family organization empowered the lives of Afro-Latin women. Prerequisite: junior standing.

42297 *Colloquium: China and Japan (3)*

Study of important issues in the history of China and Japan through reading and discussing major works pertinent to the issues selected. Prerequisite: junior standing. This course may be used to satisfy the writing-intensive requirement with approval of major department.

42397 *Colloquium: Women in Europe From Antiquity to Renaissance (3)*

This course examines the social, cultural and economic institutions which determined the position of women from antiquity to the 16th century. Other issues considered are the image and role of women, Christian perceptions of women and their impact on women's lives. Prerequisite: junior standing. This course may be used to satisfy the diversity requirement and the writing-intensive course requirement with approval of major department.

42497 *Colloquium: Women in Modern Europe (3)*

The colloquium addresses the experiences of European women from the Enlightenment to the present. Using primary sources and recent scholarship, students examine the relationship between women and state formation, industry, sexuality, empire, socialism, war, welfare, migration and feminism. Prerequisite: junior standing. This course may be used to satisfy the diversity requirement and the writing-intensive course requirement with approval of major department.

42567 *Race Relations (3)*

(Cross-listed with SOC 42567) Historical and sociological principles underlying race and ethnic relations; emphasis on black-white relations in the U.S. Prerequisite: junior standing.

43097 *Colloquium: Medieval Russia (3)*

Political, social, economic and cultural developments from the ninth to 17th centuries, particularly the nature of political organization, the Mongol impact, the role of the church and religious life in pre-Petrine Russia. Prerequisite: junior standing.

43697 *Colloquium in Tudor and Stuart England (3)*

Discussion of major problems of early modern England, including the Reformation, Puritan movement, social and economic change, and political conflict. Prerequisites: junior standing and special approval. This course may be used to satisfy the writing-intensive requirement with approval of major department.

43797 *Colloquium on Victorian England (3)*

Consideration of distinctive features of Victorian England including class structure, ideas, manners, politics, foreign affairs, empire. Prerequisite: none. This course may be used to satisfy the writing-intensive requirement with approval of major department.

**44297 Colloquium in African History (3)**

This course will deal with some of the major themes of African history. Topics will vary from semester to semester. Prerequisite: junior standing.

**45597 Colloquium in Russian History (3)**

Study of major issues in Russian history through analysis and discussion of the historiography and critical writing. Prerequisite: junior standing. This course may be used to satisfy the writing-intensive requirement with approval of major department.

**45697 Colloquium: Social History of Latin America (3)**

The formation of Latin American societies from the Iberian Conquest to the present. Prerequisite: special approval. This course may be used to satisfy the writing-intensive requirement with approval of major department.

**45797 Colloquium: Comparative Latin American Revolutions (3)**

A study of the meaning of revolution in Latin America from the wars of independence to the Nicaraguan revolution in 1979. A comparative approach is employed focusing on Mexico, Brazil, Cuba, Chile and Central America. Prerequisite: special approval. This course may be used to satisfy the writing-intensive requirement with approval of major department.

**46097 Colloquium: Stalinism (3)**

Focus on Josif Stalin's rise to power and the historiographical debates about the origins, results and legacy of his domestic and foreign policies. Prerequisite: junior standing.

**46597 Colloquium in Twentieth-Century European Diplomacy (3)**

Coverage of important works dealing with major diplomatic issues from origins of World War I to present. Prerequisite: junior standing. This course may be used to satisfy the writing-intensive requirement with approval of major department.

**46897 Colloquium on the Age of Jefferson (3)**

Intensive examination of the problems of a critical period of American history through readings, reports and discussions. Prerequisite: junior standing.

**47597 Colloquium on NATO (3)**

An examination of the historical significance of the Atlantic Alliance from its origins in the late 1940s to the present. Prerequisite: junior standing.

**47697 Colloquium on Post-1945 Europe (3)**

Coverage of the historical literature on Europe's major political, diplomatic, economic and social developments since 1945. Prerequisite: junior standing. This course may be used to satisfy the writing-intensive requirement with approval of major department.

**48097 Colloquium in Twentieth-Century U.S. Foreign Relations (3)**

Covers U.S. diplomatic history from World War I to the present emphasizing bibliography and historiography. Prerequisite: junior standing. This course may be used to satisfy the writing-intensive requirement with approval of major department.

**48697 Colloquium: U.S. Middle Period, 1820-1900 (3)**

Reading, discussion and written reviewing of important works on the period. Prerequisite: junior standing. This course may be used to satisfy the writing-intensive requirement with approval of major department.

**48797 Colloquium in African American History to 1877 (3)**

This colloquium specializes in African American history prior to 1877, with emphasis on historiographical literature of the period. Prerequisite: junior standing.

**48897 Colloquium in African American History Since 1877 (3)**

This colloquium specializes in African American history after 1877, with emphasis on historiographical literature of the period. Prerequisite: junior standing.

**48997 Colloquium on the Immigrant in American History (3)**

Study of the major problems and writings in, and approaches to, American immigration history through discussion and critical writing. Prerequisite: junior standing. This course may be used to satisfy the writing-intensive requirement with approval of major department.

**49195 Selected Topics in History (3)**

Special history course, the subject/topic of which varies in accordance with desire and competence of faculty. Precise title to be inserted in *Schedule of Classes*. Prerequisite: junior standing.

**49196 Individual Investigation (2-3)**

IP grade permissible. Prerequisite: special approval.

**49199 Senior Honors Project (3-6)**

Thesis or other independent study or creative project. Required of students seeking to graduate with honors in history. IP grade permissible. Prerequisite: special approval (see HONR 40099).

**HONORS COLLEGE (HONR)**

*In addition to the prerequisites, all Honors courses require special approval.*

**10096 Individual Honors Work (1-4)\***

Directed independent study for freshmen in any department. IP grade permissible. Prerequisites: Prior consent of instructor; approval of and preregistration with Honors College.

**10197 Freshman Honors Colloquium I (1-4)**

Required of all honors freshmen in lieu of College English. Stresses exploration, discussion and communication of ideas expressed in works related to theme of colloquium. IP grade permissible. Prerequisite: admitted to the Honors College. This course may be used to satisfy the Liberal Education Requirements (LER).

**10297 Freshman Honors Colloquium II (1-4)**

Continuation of HONR 10197. IP grade permissible. Prerequisite: admitted to the Honors College. This course may be used to satisfy the Liberal Education Requirements (LER).

**13197 Colloquium: The History of Civilization I (3)**

World history from early human societies through the mid-17th century. Prerequisite: admitted to the Honors College. This course may be used to satisfy the Liberal Education Requirements (LER) and diversity requirement.

**13297 Colloquium: The History of Civilization II (3)**

Continuation of HONR 13197. World history from mid-17th century to the present. Prerequisite: admitted to the Honors College. This course may be used to satisfy the Liberal Education Requirements (LER) and diversity requirement.

**13397 Colloquium: U.S. History I (3)**

Survey of U.S. history through 1877. Prerequisite: admitted to the Honors College. This course may be used to satisfy the Liberal Education Requirements (LER) and diversity requirement.

**13497 Colloquium: U.S. History II (3)**

Survey of U.S. history since 1877. Prerequisite: admitted to the Honors College. This course may be used to satisfy the Liberal Education Requirements (LER) and diversity requirement.

\*Course ineligible to be repeated for GPA recalculation.

\*\*Courses offered only at Regional Campuses.

**15297 Colloquium: American Politics (3)**  
This course covers the basic elements of politics at the national level in the United States: structures, processes, behaviors, institutions and policies. Special emphasis is given to conflicting theories of power as they apply to different economic, sexual and racial groups in America. Prerequisite: admitted to the Honors College. This course may be used to satisfy the Liberal Education Requirements (LER) and diversity requirement.

**15397 Colloquium: World Politics (3)**  
A practical, theoretical introduction to a study of systematic patterns in international relations. Includes analysis of rules, instruments, processes, decision-making factors, conflict resolution. Prerequisite: admitted to the Honors College. This course may be used to satisfy the Liberal Education Requirements (LER) and diversity requirement.

**15497 Colloquium: Comparative Politics (3)**  
This course introduces the different institutional structures of governance (e.g., parliamentary vs. presidential systems) in a range of different states; for different types of regimes (e.g., democratic and authoritarian); and at the international level. Prerequisite: admitted to the Honors College. This course may be used to satisfy the Liberal Education Requirements (LER) and diversity requirement.

**20096 Individual Honors Work (1-4)\***  
Directed independent study for sophomores in any department. IP grade permissible. Prerequisites: prior consent of instructor; approval of and preregistration with Honors College.

**20197 Sophomore Colloquium (1-4)**  
One-semester course or two-semester sequence exploring interdisciplinary ideas and issues related to a single theme by means of readings, discussion and individual papers and projects. IP grade permissible. Prerequisite: admitted to the Honors College.

**20297 Sophomore Colloquium (1-4)**  
See HONR 20197. IP grade permissible. Prerequisite: admitted to the Honors College.

**21197 Colloquium: Principles of Microeconomics (3)**  
Principles and policies affecting prices, including factor incomes, under alternative market structures. Tools developed to examine social problems, including poverty, crime, pollution and international relations. Prerequisite: admitted to the Honors College. This course may be used to satisfy the Liberal Education Requirements (LER).

**21297 Colloquium: Principles of Macroeconomics (3)**  
Principles and policies affecting aggregate production, consumption, investment and government expenditures. Includes role of money, the banking system, inflation, unemployment and economic growth. Prerequisites: admitted to the Honors College and HONR 21197 or ECON 22060. This course may be used to satisfy the Liberal Education Requirements (LER).

**30096 Individual Honors Work (1-4)**  
Directed independent study for juniors in any department. IP grade permissible. Prerequisites: Prior consent of instructor; approval of and preregistration with Honors College.

**30197 Junior Colloquium (1-4)**  
One-semester course or two-semester sequence for juniors or seniors exploring interdisciplinary ideas and issues related to single theme by means of readings, discussion and individual papers and projects. IP grade permissible. Prerequisite: admitted to the Honors College.

**30297 Junior Colloquium (1-4)**  
See HONR 30197. IP grade permissible. Prerequisite: admitted to the Honors College.

**30497 Colloquium: International Study (1-4)**  
Designed for students preparing for participation in overseas programs sponsored by Center for International and Comparative Programs. Provides basis for future research abroad. IP grade permissible. Prerequisite: admitted to the Honors College.

**35097 Colloquium in Political Science (1-4)**  
Intensive study of significant problems in politics. Topic, readings and core research theme vary from semester to semester. Prerequisite: admitted to the Honors College.

**40085 Senior Honors Portfolio (1)**  
Construction of a senior portfolio, consisting of a collection of artifacts and a reflective essay interpreting the student's growth during the college years. IP grade permissible. Prerequisite: senior standing.

**40096 Individual Honors Work (1-4)**  
Directed independent study for seniors in any department. IP grade permissible. Prerequisites: prior consent of instructor; approval of and preregistration with Honors College.

**40099 Senior Honors Thesis/Project (1-10)**  
Thesis or creative project. IP grade permissible. Prerequisites: special approval of department.

**40197 Senior Colloquium (1-4)**  
One-semester course or two-semester sequence exploring interdisciplinary ideas and issues related to single theme by means of readings, discussion and individual papers and projects. IP grade permissible. Prerequisite: admitted to the Honors College.

**40297 Senior Colloquium (1-4)**  
See HONR 40197. IP grade permissible. Prerequisite: admitted to the Honors College.

**40497 Colloquium: International Study (1-4)**  
See HONR 30497. IP grade permissible. Prerequisite: admitted to the Honors College.

## HORTICULTURE TECHNOLOGY (HORT)\*\*

**16001 Opportunities in Horticulture (1)**  
A survey of those opportunities available within the "green industry" both in education and as a career option. Guest speakers and field trips are part of the class. Prerequisite: none.

**26001 Occupational Regulations and Safety (2)**  
Presentation of the basic standards, rules, safety regulations and laws pertaining to horticultural and related industries which will affect the work atmosphere. Lecture two hours weekly; offered only at the Salem Campus. Prerequisites: BSCI 16001 and HORT 16001.

**26010 Arboriculture (3)**  
Basics of pruning and tree climbing techniques. This course covers the equipment and safe use of equipment commonly found in the arboricultural industry. Lecture two hours weekly; lab three hours weekly; offered only at the Salem Campus. Corequisite: HORT 26011. Prerequisites: BSCI 16001 and HORT 16001 and CHEM 16001.

**26011 Cooperative Work Experience in Tree Care (3)**  
Cooperative work program through which the skills necessary to perform professionally in this occupation will be acquired. This course offered only at the Salem Campus. Requires a minimum of 30 hours per week of work experience. Not more than 9 credit hours in this or a combination of other work experience classes will be allowed. S/U grading; IP grade permissible. Corequisite: HORT 26010.

**26012 Urban Forestry (3)**  
Urban forestry and the planning and managing of urban green-scapes. Appraisal and computerized GIS/GPS inventory of urban vegetation, urban land use planning and legal ordinances, maintenance and management of street and park trees. Outdoor field trips and guest lecturers. Prerequisites: HORT 16001 and BSCI 16001.

**26014 Plant Propagation and Greenhouse Production (3)**

Asexual/vegetative propagation including anatomical and physical concepts. Techniques covered include cuttings, budding, grafting, layering, dividing and micropropagation. Plant propagation by seeding and plugs shall be promoted along with crop production. Prerequisites: HORT 16001 and BSCI 16001.

**26016 Irrigation Design and Maintenance (3)**

Principles of irrigation design, installation, maintenance and drainage. Specific information about the selection of sprinkler heads, pipe, pumps, basic hydraulics, water conservation methods and automatic control systems shall be explored. Drawing of irrigation plans shall be required. Prerequisites: HORT 16001 and BSCI 16001.

**26018 Landscape Construction (3)**

The basic skills and techniques involved in landscape contracting and construction including building material data, site grading, contour mapping, deck construction, water features, lighting, landscape paving and retaining walls. Field trips and outside hands-on experience. Prerequisite: HORT 16001.

**26020 Professional Landscape Management (3)**

A detailed discussion and practice of managing trees, shrubs and flowers within the landscape. Additional concepts such as the types of equipment used in the "green industry," marketing, writing specifications, bidding projects and personnel management. Prerequisites: BSCI 16001 and HORT 16001.

**26021 Cooperative Work Experience in Landscape Management (3)**

Cooperative work program through which the skills necessary to perform professionally in this occupation will be acquired. This course offered only at the Salem Campus. Requires a minimum of 30 hours per week of work experience. Not more than 9 credit hours in this or a combination of other work experience will be allowed. S/U grading; IP grade permissible. Corequisite: HORT 26020.

**26030 Turf Grass Management (3)**

Basic principles of turf management. This course covers turf equipment and the safe use of equipment commonly found in the turf industry. Lecture two hours; lab three hours weekly; course offered only at the Salem Campus. Corequisite: HORT 26031. Prerequisites: BSCI 16001 and HORT 16001 and CHEM 16001.

**26031 Cooperative Work Experience in Turf Grass Management (3)**

Cooperative work program through which the skills necessary to perform professionally in this occupation will be acquired. This course offered only at the \*Course ineligible to be repeated for GPA recalculation.  
\*\*Courses offered only at Regional Campuses.

Salem Campus. Requires a minimum of 30 hours per week of work experience. Not more than 9 credit hours in this or a combination of other work experience classes will be allowed. S/U grading; IP grade permissible. Pre/corequisite: HORT 26030.

**26032 Golf Course Management (3)**

The golf course environment as it relates to turf grass maintenance and pest/disease management. The construction and management of greens, tees, water and bunker management practices, turf aeration issues, topdressing and administrative concerns. Prerequisite: HORT 16001 and 26031 and BSCI 16001.

**26046 Landscape Design I (3)**

An introduction to landscape appreciation and history, the landscape industry and elements of the landscape design process. Students will assess proper plant placement and uses, develop graphic communication skills and present a project. Field trips and project site work as required. Prerequisite: HORT 16001 and BSCI 16001 and 26003.

**26047 Landscape Design II (3)**

The landscape process with emphasis on commercial size design projects including client communications, landscape presentations, topography issues and landform ecology. Color rendering, combining irrigation and construction details are covered. Prerequisite: HORT 26046.

**HOSPITALITY MANAGEMENT (HM)****13022 Sanitation and Safety Principles and Practices (3)**

Safety and sanitation practices pertinent to food service. Emphasis is on laws, food microbiology, storage practices and accident prevention. Prerequisite: none.

**13023 Techniques of Food Production (5)**

Commercial food production principles for milk, cheese, eggs, produce, grains, meats, poultry and fish are covered. Sauces, soups, salads, entrees, side dishes and desserts are prepared with an emphasis on food quality and safety, effective equipment use, work planning and simplification, recipe standardization, pricing and presentation. Prerequisites: HM 13022 and nutrition and food (NF) majors. Special fee: \$60 flat fee—subject to change.

**13024 Introduction to Hospitality Management (2)**

Career opportunities and the scope, development and history of the hospitality industry. Introduction to management in the hospitality industry including food service, lodging and tourism. Prerequisite: none. Special fee: \$10 flat fee—subject to change.

**23012 Food Study (3)**

Principles of food preparation and quality evaluation with consideration of nutritive value and retention. One hour of lecture and four hours of lab. (Note: nutrition and dietetics majors should take CHEM 10060, 10061 and 20481; students in other majors should take CHEM 10050 and 10052 as prerequisites for this course.) Prerequisite: NUTR 23511. Special fee: \$33 flat fee—subject to change.

**23030 Lodging Operations (3)**

This course provides students with an introduction to lodging, resort operations and management. Skills needed to succeed in the field and career opportunities are emphasized. Prerequisite: none.

**33020 Legal Issues in the Hospitality Industry (3)**

Overview and analysis of legal issues of concern to the hospitality operation. Topics include: employment law; food and beverage liabilities; patron civil rights, local, state, and federal regulations; and franchising. Prerequisite: junior standing.

**33026 Hospitality Cost Control and Analysis (5)**

Prepares students to analyze and control costs encountered in hospitality operations. Includes computer applications, math drills and simulations. Prerequisites: MIS 24053 and ACCT 23020 and HM 13023.

**33028 Hospitality Purchasing (3)**

Emphasis on the selection of food, goods and services for the management of hospitality organizations. Emphasis is placed on product identification, grading and quality standards. Prerequisite: HM 13023.

**33029 Catering and Banquet Preparation and Service (5)**

Combines theoretical and practical applications of planning, merchandising, costing, producing and serving catered meals. Prerequisite: HM 33026. Special fee: \$25 flat fee—subject to change.

**33035 Hospitality Service Quality Management (3)**

The unique issues associated with managing guest satisfaction will be explored. The delivery of quality services and recovery from service failure in hospitality organizations will be studied from a human resource and organizational perspective. Prerequisite: MIS 24163.

**33036 Club Management (3)**

Introduction to private club management and operations. Strategic planning, marketing, human resources, service excellence, legal issues and financial management will be emphasized within the context of food and beverage, golf and recreation. Prerequisite: junior standing.